

# THE GALLUP ORGANIZATION

PRINCETON

## National Survey of Drinking and Driving Attitudes and Behaviors: 1999

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National Highway Traffic Safety Administration

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# Executive Summary

## Background

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The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries, and reduce traffic-related health care and other economic costs. The goal is to meet the U.S. Secretary of Transportation's objective of reducing alcohol-related fatalities to 11,000 by the year 2005. Slight changes in the survey design and methodology in 1999 limit direct comparisons in some areas to the data collected in the previous administrations.

In order to plan and evaluate programs intended to reduce alcohol-impaired driving, NHTSA needs to periodically update its knowledge and understanding of the public's attitudes and behaviors with respect to drinking and driving. NHTSA began measuring the driving age public's attitudes and behaviors regarding drinking and driving in 1991. This study represents the fifth of these biennial surveys designed to track the effectiveness of current programs and to identify areas in need of attention.

Telephone interviews were conducted with a nationally representative sample of 5,733 persons of driving age (age 16 or older) in the United States between October 12 and December 12, 1999. Findings from the current survey are presented first. Then, comparisons with prior surveys are made.

Slight changes in the survey design and methodology in 1999 limit the number of direct comparisons that can be made to the previous NHTSA drinking and driving administrations.

## Key Findings

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### **Drinking and Driving Behavior**

About 21% of the driving age public have driven a motor vehicle within two hours of consuming alcoholic beverages in the past year. These persons are referred to as "drinker-drivers" throughout this report.

Males are more than twice as likely to have driven within two hours of drinking as are females (31% compared to 13%).

Adults age 21 to 45 are the most likely to be drinker-drivers, with 37% of males and 18% of females driving within two hours of alcohol consumption.

On average, drinker-drivers consume 2.7 drinks prior to driving. Drinker-drivers under age 21 consume an average of 6.3 drinks prior to driving.

Drinker-drivers made between an estimated 840 million and 1.1 billion driving trips within two hours of consuming alcohol in the previous year. Those age 21 to 29 make a disproportionately high number of drinking-driving trips (21% of trips while they are 16% of the driving age population).

Drinker-drivers operate a motor vehicle with an average blood alcohol concentration (BAC) of .03, which is below the legal limit for those age 21 or older; however, about 5% of drinker-drivers are estimated to have a BAC of .08 or higher. While those age 16-20 make only about 1% of all drinking-driving trips, they do so at a BAC level three times that of legal age drinkers. Which is about .10 BAC.

About one in ten (11%) persons age 16 or older has ridden with a driver they thought might have consumed too much alcohol to drive safely in the past year. This number rises to about two in ten among those age 21 to 29, and to one in four among those age 16 to 20 (23%). Of those who rode with unsafe persons, four in ten riders decided that their drivers were unsafe *before* they were riding in the vehicle, but still rode with them.

### **Attitudes About Drinking and Driving**

The driving age public sees drinking and driving as a serious problem that needs to be dealt with. Virtually all (97%) see drinking and driving by others as a threat to their own personal safety and that of their family, and nearly three-quarter (73%) feel reducing drinking and driving is extremely important in terms of where tax dollars should be spent.

Large proportions of those age 16 and older are supportive of “zero tolerance”<sup>1</sup> for drinking and driving. Nearly seven in ten (68%) agree that people should not be allowed to drive if they have had any alcohol at all. Non drinker-drivers (76%) are more supportive of this belief than are drinker-drivers (33%).<sup>1</sup>

A majority (63%) of persons of driving age believes that they, themselves, should not drive after consuming more than two alcoholic beverages. In contrast, male drinker-drivers under age 30 feel that they can safely drive after consuming about four drinks within two hours. An average 170-pound male would still be below the legal limit<sup>2</sup> (either .08 or .10) after four drinks.

### **Prevention and Intervention of Drinking and Driving**

Half of drivers 16 or older who consume alcoholic beverages, report at least one occasion where they refrained from driving when they thought they may have been impaired. Most of these persons rode with another driver instead.

Virtually all (98%) of those 16 and older feel that they should prevent someone they know from driving if they are impaired. Thirty-two percent (32%) of persons of driving age have been with a friend who may have had too much to drink to drive safely. Most of these (82%) tried to stop the friend from driving. Intervention was successful about 80% of the time.

Three in ten (31%) of those 16 or older have ridden with a designated driver in the past year, with those under age 30 most likely to have done so. Four in ten drivers have acted as a designated driver in the past year. Designated drivers were reported to have consumed less than one-half of one alcoholic drink, on average, prior to driving.

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<sup>1</sup> In this report ‘zero tolerance’ refers to no driving after drinking by anyone, of any age. All states have ‘zero tolerance’ laws which refer specifically to drivers under 21.

<sup>2</sup> As of November 2000, 19 states, D.C. and Puerto Rico have .08 per se laws. 30 states have .10 per se laws.

## **Enforcement**

About 1% of the driving age public report being arrested for impaired driving in the past 2 years. Males under age 30 were most likely to have been arrested. This is consistent with the higher average calculated BAC levels of young drinker-drivers.

Six of ten (62%) believe that a conviction is very likely or certain if they were arrested for a drinking-driving violation, while one in seven (15%) feel that a conviction would be unlikely.

The driving age public generally feels that an impaired driver is more likely to have a crash than to be stopped by police. On average, the public feels that about 43% will get in a crash while the police will stop about 33%.

About 64% feel that current drinking and driving laws and penalties are effective at reducing drinking and driving. Yet, three of four (73%) persons age 16 or older feel that drinking-driving penalties should be more severe.

One in three (34%) persons of driving age have seen a sobriety checkpoint in the past year. About 19% have been through such a checkpoint themselves. A majority (64%) feel that sobriety checkpoints should be used more frequently.

## **Blood Alcohol Concentration (BAC) Levels**

Four of five (80%) persons of driving age have heard of blood alcohol concentration (BAC) levels, but fewer than three in ten (27%) can correctly identify the legal BAC limit for their state.

More than two-thirds (68%) of driving age residents who have heard of BAC levels support the use of a .08 BAC legal limit in their state. More than eight of ten (86%) of those who currently reside in .08 states believe that the limit should remain at .08 or be made stricter, while 49% of those in .10 states feel their state should lower the limit to .08. Six in ten feel that all or most drivers would be dangerous at the BAC limit in their state.

Support for .08 is strongest among those who do not drink and drive, with 70% feeling the limit should be .08 or stricter (lower). While support is not as strong among those who drink and drive, 36% of this group also support a BAC limit .08 or stricter.

## **Crash Experience**

Nearly two in ten (17%) persons of driving age were involved in a motor vehicle crash as a driver in the past two years. Alcohol was involved in about 2% of reported crashes.

Drivers under age 21 were more likely to be involved in a crash both as a driver and a passenger than were other drivers.

## **Perceived Effectiveness of Strategies to Reduce Drunk Driving**

The general driving age population feel that the following would be the most effective strategies to reduce impaired driving providing alternative means of transportation (to self driving) for impaired drivers (63% very effective making bars and liquor stores more legally responsible for selling to minors/drunk patrons 55%); and increasing law enforcement efforts to arrest drunk drivers (53%). Making alcohol harder to buy (by limiting sales outlets), increasing the cost through increased taxes and limiting alcohol advertising are felt to be much less effective strategies.



A key purpose of this study is to examine trends in attitudes and behaviors regarding drinking and driving. While new questions have been added to the surveys in 1995, 1997 and again in 1999, much of the survey content has remained similar to the 1991 benchmark study. Data on similar questions was compared to identify statistically significant changes over time. All differences highlighted in this report were found to be statistically significant using ANOVA, Pearsons chi-square tests and paired t-tests as appropriate, at a  $p=.05$  level.

Since the 1991 study only included persons age 16 to 64 (the later studies included persons over 64 as well), this trend analysis includes only this age group for comparisons across all four years.

### **Drinking-Driving Prevalence**

The proportion of the driving age population who report driving within two hours of drinking had been on a decline from the 24% level in 1991 and 1993 to 20% in 1995, and 21% in 1997, however, the estimate has increased back to 23% in 1999.

Among drivers who drove after drinking alcohol “in the past year”, the average number of past-year trips has declined steadily from 13.4 trips in 1991 to 11.1 trips in 1997, and has remained roughly the same at 11.3 average yearly trips in 1999.

The amount of alcohol consumed on the most recent trip also remained consistent with an average of 2.6 drinks in 1995 and 1997 and 2.7 drinks in 1999.

The total number of estimated drinking and driving trips decreased by about 27% between 1993 and 1999 from about 1.3 billion to an estimated 957 million. Such trips have decreased most among those under age 30 (about a 36% decline).

Drinker-drivers drive with an average estimated BAC of .04. This BAC level is slightly higher in 1999 than the .03 BAC estimated in 1995 and 1997.

### **Riding with Impaired Drivers**

While relatively few persons age 16 to 64 put themselves at risk by riding with an impaired driver in the past year, this level still has decreased from its 1991 level of 15% to about 12% currently.

### **Designated Drivers**

While the reported use of designated drivers decreased between 1993 and 1995 (from 37% to 32%), the current data show an increase back to the 36% level found in 1993. There has also been a reported increase in drivers acting as a designated driver. Increases in being a designated driver are greatest among 16- to 29-year-olds.

### **Beliefs about Enforcement**

A larger proportion of persons of driving age believe that current laws and penalties to reduce drinking and driving are effective in 1999 (64%) than was found in 1997 (54%). Support for zero tolerance, measured as strong agreement that people should not be allowed to drive if they have had any alcohol at all, has remained consistent since 1991, with about 45% supporting zero tolerance. Support for more frequent use of sobriety checkpoints increased from 62% in 1993 to 66% in 1997, and stands at 64% in 1999.

## **Awareness and Knowledge of BAC Levels**

While awareness of BAC (blood alcohol concentration) levels increased between 1995 and 1997, (with about 84% of the driving age public reporting awareness as compared to 79% in 1995), it has fallen back to levels near those found in 1995 (80%). Just 28% of the driving age public correctly knows the BAC limit for their state; however, this is improved from the 20% who knew it in 1995. Increases in knowledge of state BAC limits are strongest among residents in .08 BAC states.

## **Acceptance of BAC Limits**

While support of .08 BAC limits remains strongest among residents in states currently with a .08 limit, overall acceptance of .08 BAC limits has increased since first measured in 1997. In 1997, 56% of the driving age population felt that their state should lower the legal BAC limit to .08 (from .10) or keep it at .08 (if it currently was that level). Support of .08 limits has increased to 68% in 1999. This includes 84% support in current .08 states and 49% of those in current .10 states.

## **Indicators of Problem Drinkers**

Estimates of problem-drinkers (those identified as very heavy or binge drinkers or those with psychological impacts from drinking) have increased since 1993. In 1993, problem-drinkers accounted for 12% of drinker-drivers. In contrast, in 1999 23% of drinker-drivers can be considered problem-drinkers. While these problem drinkers account for 23% of drinker drivers, they are responsible for 41% of all the drinking driving trips made in 1999 (328-454 million).



# Introduction

## Background and Objectives

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In the United States more than 300,000 persons were injured and nearly 16,000 persons (38% of crash fatalities) died in alcohol-related motor vehicle crashes during 1999 (Traffic Safety Facts 1999, National Center for Statistics and Analysis, NHTSA). In comparison to the mid-1980's, these figures reflect a significant reduction in alcohol-impaired driving, but the toll of injuries and fatalities remains unacceptably high.

The National Highway Traffic Safety Administration (NHTSA), along with other national and state agencies as well as grass roots organizations, have aggressively worked toward reducing the incidence of alcohol-related motor vehicle crashes. Passage of the 21-year-old minimum drinking age laws in all 50 states and the District of Columbia, as well as the October 2000 passage of a stricter standard for drinking and driving (setting .08 percent blood alcohol concentration as a threshold for impaired driving) is indicative of continuing progress in this area.

This 1999 survey represents the fifth in a series of biennial surveys begun in 1991. The objective of these studies is to measure the current status of attitudes, knowledge and behavior of the general driving age public with respect to drinking and driving. The data collected are used to track the nature and scope of the drinking-driving problem and to identify areas in need of further attention in the pursuit of reduced drinking and driving.

## Methods

### *Sampling Objective*

The sampling objective of the study was to acquire a representative national sample of the general driving age public (age 16 and older) while allowing for a minimum of 100 completed interviews in each state and DC. Also, since the requirement of 100 completed interviews per state was new to the 1999 administration, a separate control group sample was undertaken to mirror the sample design used in previous administrations to test for differences due to this sampling change. Respondents were reached and interviewed by telephone.

Gallup used a three-stage procedure to meet the sampling objective for each two samples:

1. For the main sample, Gallup first identified the universe of residential telephone listings within each of the 50 states and District of Colombia.
2. Second, Gallup drew a systematic sample of telephone 100-number blocks within each state and DC. Gallup then randomly generated the last two numbers for a full ten-digit phone number within each valid block selected in the previous stage. This procedure provides for an unequal, but known, probability of selection for each working residential phone number in the US. For the control group sample, once the universe of residential telephone listings was identified within each of the geographic U.S. Census regions, Gallup drew a systematic sample of telephone 100-number blocks within each region. Gallup then randomly generated the last two numbers for a full ten-digit phone number within each valid block selected in the previous stage. This procedure provides for an equal probability of selection for each working residential telephone number in the U.S. (both listed and unlisted residential telephone households).
3. In the second stage, for both the main sample and the control group sample, a single respondent was randomly selected (using the “most recent birthday” method described in the Methods report) for inclusion from all eligible members of the driving public residing in that household.

Up to 14 attempts were made to reach each randomly selected respondent. Seven attempts were made to reach the household, and once a respondent in the household was identified, Gallup made up to seven additional attempts to reach that person.

Gallup completed a total of 5,127 telephone interviews with persons age 16 and older between October 12 and December 12, 1999 in the main sample and 606 in the control group sample. Interviews were completed in both English- and Spanish-language, using a computer-assisted-telephone interviewing (CATI) system.

## *Sample Weighting*

While the main sample and the control group samples were weighted separately, a similar sample weighting was carried out for each sample. The final telephone samples of persons age 16 and older were weighted to equalize selection probabilities (at both the household and the individual levels) and to adjust for non-response bias by demographics. The following five-stage procedure was used:

1. In step one, households with multiple telephone lines (which results in giving them a higher chance of falling into the sample) were given a weight equal to the inverse of the number of telephone lines in the household.
2. To correct the disproportionality of unequal selection within the household (persons in household with only one person of driver age or older have a greater chance of selection than households with multiple eligible people), the inverse of the total number of persons age 16 or older was applied.
3. In the third stage, Gallup weighted the actual respondent database (weighted in the first two stages) to match the known demographic characteristics of the U.S. population by age, race, and gender based on the most recent Census Population Projections. For the control group sample, this was carried out at the census region level; for the main sample, at the individual state level.
4. The population of geographic areas were weighted back into the correct proportions to match the known proportion in the entire U.S. For the control group sample, the populations of each of the census regions were put into alignment while the main sample, the sample for each of the 50 states and D.C., were put into their correct proportion in the entire universe.
5. Finally, Gallup projected the sample population up to the total non-institutionalized national population age 16 or older.

The final number of weighted and unweighted interviews by age and gender appear below:

	Gender		Age					
	<u>TOTAL</u>	<u>Male</u>	<u>Female</u>	<u>16-20</u>	<u>21-29</u>	<u>30-45</u>	<u>46-64</u>	<u>65+</u>
<b><u>Main Sample:</u></b>								
Unweighted	5127	2205	2922	318	764	1691	1476	963
Weighted	5127	2469	2658	472	807	1689	1316	824
Estimated sampling error range	±1.4%	±2.1%	±1.8%	±5.5%	±3.6%	±2.4%	±2.5%	±3.3%
<b><u>Control Group Sample:</u></b>								
Unweighted	606	229	377	40	90	175	171	130
Weighted	606	292	314	55	95	193	161	99
Estimated sampling error range	±4.0%	±6.5%	±5.1%	±15.5%	±10.3%	±7.4%	±7.5%	±8.6%

### ***Testing the Differences Between the Two Samples***

Since a different sampling method was used in 1999 than in previous administrations (requiring 100 completed interviews per state rather than a proportional number of interviews), the data obtained using the two samples (main and control) were compared to test for significant differences. More than two dozen variables were selected for testing. Variables were selected either because the responses on the main sample data and the control group sample appeared to be different based on a visual inspection (approximately 2 percentage points or greater difference in responses) or because they were key questions for the analyses (such as the question ascertaining if the respondent drove within two hours of consuming alcohol). Tests were run using SUDAAN statistical software to account for the complex sampling and weighting designs. Of all the variables tested, only one was found to have a statistically significant difference at a 95% confidence level between the two samples: Q33 – In the past twelve months, have you ever driven a motor vehicle within two hours of consuming alcoholic beverages. Based on this finding of difference on this item, only data from the main survey sample is included in this report.

### ***Survey Instrument***

In addition to the sample differences for 1999 relative to earlier survey administrations, a number of changes to the survey instrument were made which could have affected comparability between the 1999 results and those of previous administrations. To test for the effect of changing the questionnaire, the respondents in the main sample were administered the questionnaire with the newly worked and ordered questions, while the respondents in the control group sample were administered a survey instrument with question wordings and order similar to that used in previous administrations.

### ***Testing the Differences Between the Two Surveys***

The data from the control group survey and the main sample survey were compared using SUDAAN statistical software to account for the complex sample design and weighting used for both samples. Again, more than two dozen questions were tested, either because on visual inspection it was believed there might be a significant difference between the two versions (generally a 3 percentage point difference or greater) or because the question was of key interest in the analysis. Of the variables tested, five were found to have statistically significant differences between the two versions, at a 95% level of confidence. A more detailed explanation of the tests of significance can be found in Volume 2; Appendix A: Methods. For the items which were found to have statistically significant differences, only the main sample data are used in the contained analysis. For the items where there were no differences, the main sample results and the control group sample results are combined in the analysis to provide for more robust estimates.

### ***Precision of Sample Estimates***

All sample surveys are subject to sampling error in that results may differ from what would be obtained if the whole population had been interviewed. The size of such sampling error depends largely on the number of interviews. For the main sample of 5,127 telephone interviews, the expected maximum sampling error range is approximately +/- 1.4% at the 95% level of confidence. The table on page 3 shows the sampling error ranges by age and gender at the 95% level of confidence. For the control group sample of 606 interviews, the estimated sampling error is  $\pm 4.0$ . For the combined samples of 5,733, the estimated error range is  $\pm 1.3\%$ . Due to the stratification and other complexities of the sample design, in some cases (particularly among smaller sub-groups of the population) the error ranges will be slightly larger than those shown in the table. This information is provided to offer the reader a ***general*** sense of the range of the true estimates. The report Volume II: Methods, presents a table showing the expected sampling error ranges for sub-group sizes in the sample.

### **Data Presented**

The findings of this study are presented in two parts. The first section examines the results from the current survey administration. The second part (beginning on page 87) examines trends over the five survey administrations.

Part one is presented in the following chapters:

- Drinking and Driving Behaviors
- Perceptions of Drinking and Driving as a Problem
- Prevention and Intervention
- Enforcement of Drinking and Driving Laws
- Knowledge and Awareness of BAC Levels and Legal Limits
- Motor Vehicle Crash and Injury Experience
- Effectiveness of Strategies to Reduce Drunk Driving
- Racial and Ethnic Differences



The following definitions are used throughout this report:

**Drinking-drivers:** persons who drove within 2 hours of consuming alcohol

**Other drivers who drink:** persons who drank alcohol in the past year, and who drove in the past year, but have not driven within two hours of consuming alcohol in the past year.

**Problem drinkers:** “Problem drinkers” are defined as those who meet at least ONE of the following three conditions:

- a.) Said “yes” to two or more of the “CAGE” measures;
  - “Have you felt you should cut down on your drinking?” (“C” for “cut down”);
  - “Have people annoyed (“A”) you by criticizing you about your drinking?”;
  - “Have you felt bad or guilty (“G”) about your drinking?”;
  - “Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover?” (“E” for “eye-opener”).
- b.) Consumed five or more drinks on four or more days in a typical four-week period;  
or
- c.) For females, consumed eight or more drinks on a given day in the past four weeks, or for males, consumed nine or more drinks on a given day in the past four weeks.

(Ewing, 1984; Skinner and Holt, 1987)

It should be noted that problem drinkers are not by definition drinker-drivers, as they may not drive after consuming alcohol.

**Trip:** a single occasion a person drove a motor vehicle

**Drinking-driving trip:** a trip in which a person drove a motor vehicle within two hours of consuming alcohol

**BAC (Blood Alcohol Concentration) Estimate V<sup>1</sup>**

```
compute mass=bodwgt/2.2046.  
if sex=1 waterpc=.58.  
if sex=2 waterpc=.49.  
metabac=(qn39+(qn41/60)-1)*0.012.  
compute waterkg=mass*waterpc.  
compute alcoz=qn38*.045.  
compute alcml=alcoz*23.36.  
compute alcg=alcml*.806.  
compute alckg=alcg/100.  
if waterkg>0 estbac=100*(alckg/waterkg).  
if estbac deltabac=estbac-metabac.  
if deltabac<0 deltabac=0.  
Where: bodwgt=weight in pounds  
sex=1-male 2-female  
qn39=time spent drinking (in hours)  
qn41=time from last drink to drive (in minutes)  
qn38=number of drinks consumed
```

<sup>1</sup> BAC Estimation formula is from: Office of Program Development and Evaluation  
National Highway Traffic Safety Administration  
October, 1994

# 1999 Survey Administration Findings

## Chapter 1: Drinking and Driving Behaviors

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This section provides information on the driving age public's behaviors with regard to drinking and driving. Specifically it covers the following topics:

- Prevalence and frequency of past-year and past-month drinking and driving behavior
- Estimates of total drinking and driving trips
- Drinking patterns of drinker-drivers and others who drink
- Characteristics of drinking-driving occasions
- Involving other passengers and children
- Estimated BAC levels
- Identifying problem drinkers; comparisons with other drinking drivers
- Riding with potentially unsafe drivers
- Driving when thought over legal limit

### Past-Year and Past-Month Drinking and Driving Prevalence

About one in five (21%) persons of driving age have driven a motor vehicle within two hours of consuming alcoholic beverages in the past year. Males are more than twice as likely to exhibit such behavior as females, with 31% of males and 13% of females reporting at least one drinking-driving trip in the past year. [Figure 1-A]

Adults age 21 to 29 and those 30 to 45 are the most likely to report having driven within two hours of consuming alcohol, with more than one-third of males, and 18% of females in these age groups reporting such behavior. Those under legal drinking age are the least likely to have driven within two hours of drinking alcohol, with about 2% of those age 16 to 18 and 12% of those age 19-20 reporting past-year drinking-driving trips.

While one of the goals of this study is to obtain past-year estimates of drinking and driving behaviors, the accuracy of specific recall of drinking-driving trips over shorter periods is generally more reliable, particularly for behaviors that occur frequently. Thus, past year drinker-drivers were also asked for the total number of drinking-driving trips they had made within the past 30 days.

About one in eight (12%) adults of driving age has driven within two hours of drinking alcohol within the past 30 days. In relationship to reported past-year behavior, about one-half of all past-year drinker-drivers have made at least one drinking-driving trip within the past 30 days. Males are four times as likely as females to report past-month drinking and driving. Also consistent with the past-year measure, persons in their 20s and 30s are most likely to drive within two hours of drinking in the past month. The proportion of past-month drinker-drivers declines with age. [Figure 1-B].

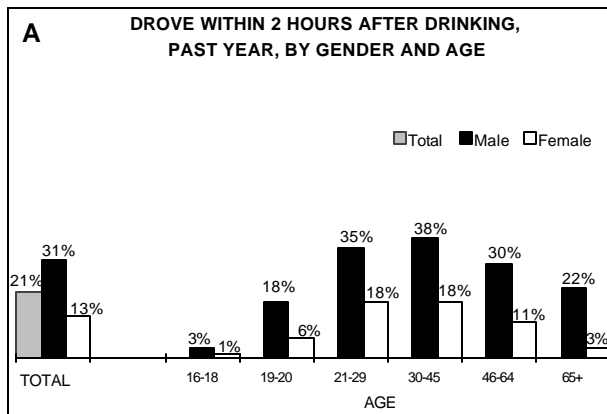
### Frequency of Past-Year and Past-Month Drinking-Driving Trips

Those who have driven within two hours of drinking alcohol in the past year, report an average of about 11 such trips. Males are not only more likely to report drinking-driving behavior, but those who do drink and drive do so almost twice as often as do females. Males report an average of 13.2 drinking-driving trips as compared to 6.6 average trips by female drinker-drivers. [Figure 1-C].

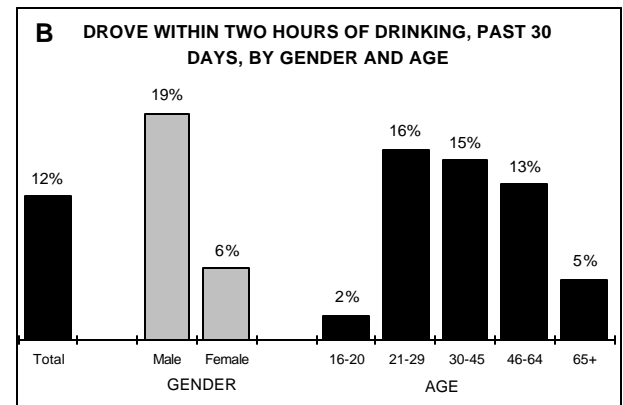
While adults in their 20s through mid 40s are as likely to drink and drive, those in their 20s report making an average of 50% more drinking-driving trips annually than older counterparts. Those age 21-29 report an average mean of 14.9 trips while 30- to 45-year-olds report an average of about 9.5 yearly drinking-driving trips each. Minors report the fewest past-year drinking-driving trips reporting an average of less than four trips last year.

Past-year drinker-drivers report an average (mean) of 1.7 drinking-driving trips within the past 30 days. Males report making nearly twice as many past-month drinking-driving trips as females. The average number of such trips generally increases with age, although past-year drinker-drivers age 21-29 make more trips than many of their older counterparts. [Figure 1-D].

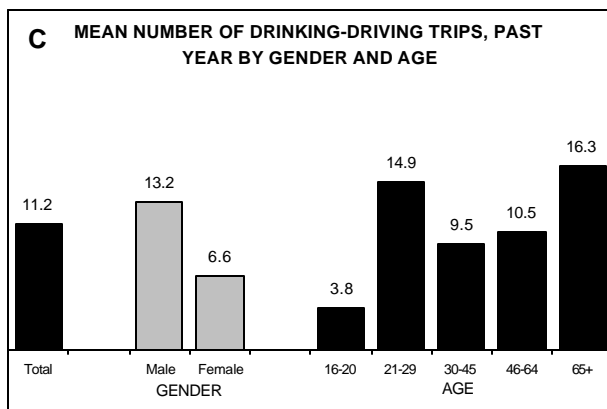
**FIGURE 1: PAST-YEAR AND PAST-MONTH DRINKING AND DRIVING BEHAVIOR**



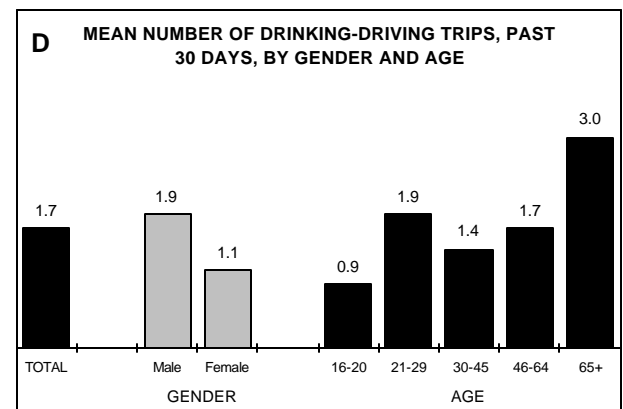
Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: all respondents; n=5127]



Qx: *In the past 30 days, how many times have you driven within two hours after drinking any alcohol?* [Base: total respondents n=5127]



Qx: *How many times in the past 12 months have you driven within two hours after drinking any alcohol?* [Base: drove after drinking, past year\*]



Qx: *In the past 30 days, how many times have you driven within two hours after drinking any alcohol?* [Base: drove after drinking, past year\*\*]

\*\* Sample bases for this page:

Total drove after drinking past year n=1086

Male n=697, female n=389

16-20 n=29, 21-29 n=234, 30-45 n=462, 46-64 n=282, 65+ n=77

### Percent of Past-Month Drinking-Driving Trips by Age and Gender

Drinker-drivers in their 20s, while the most likely to report any past-month drinking-driving occasions, account for just 21% of all drinking-driving trips in an average month. Middle-age persons account for the lion's share of past-month drinking-driving trips, with those 30-45 making 33% and 46- to 64-year-olds making 27% of these trips. [Figure 2-A].

Males account for eight of ten (81%) reported drinking-driving trips made each month. Females make about 19% of such trips [Figure 2-B].

### Estimated Total Yearly Drinking-Driving Trips

An analysis was undertaken to estimate the total drinking-driving trips for the driving public based on self-reported data. For the purposes of this analysis alcohol-impaired driving was defined as any positive response to the question "In the PAST 30 DAYS how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages?"

### Calculation of Drinking-Driving Trips

For this analysis, the past 30-day measure was felt to be more reliable than the self-reported past 12-month measure. The total number of drinking-driving trips was calculated for each respondent by multiplying the self-reported number of trips in the past month by 12 to obtain a yearly total. The number of trips was summed across respondents and is reported by age and gender in Figure 2-C.

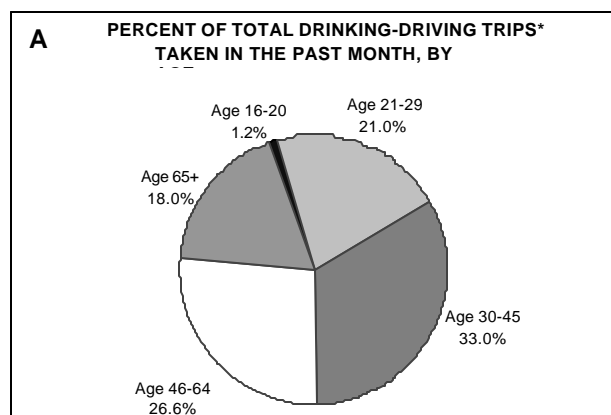
It is important to note that the total trip data presented here may not reflect the true number of alcohol-impaired driving trips made each year for a number of reasons: people may not be able to accurately recall the number of such trips, the previous month may not be indicative of the respondent's total year drinking-driving trips and people may under-report such behavior if they feel it is socially desirable to do so. This analysis is meant to provide an approximation of the range of possible drinking-driving trips by gender and age.

Overall, drinker-drivers made an estimated 844 million to 1.1 billion drinking-driving trips in the past year. Males made about 777 million (or 81%) of these total trips. Sixteen to 20-year-olds made between 4.3 and 19.0 million drinking-driving trips. The error range around these total yearly trip estimates by gender and age category is shown at the bottom of Figure 2.

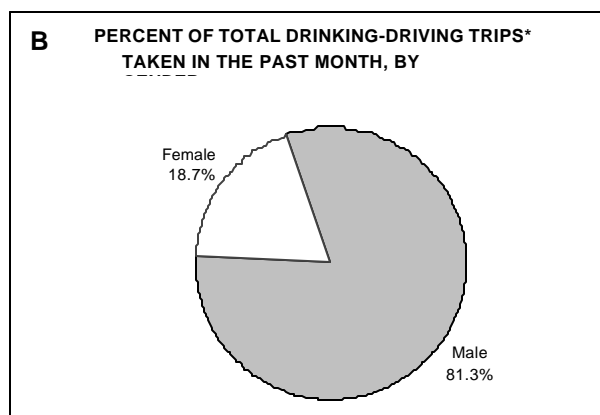
Figure 2-D presents the proportion of total drinking-driving trips made by age and gender in relation to the proportion that each of these groups comprises in the total population. While 21- to 29-year-olds are just 16% of the driving age population, they make 21% of all drinking-driving trips. Those age 16-20 make up 9% of the driving age population, but account for just 1% of drinking-driving trips.

**EDITOR'S NOTE:** While past month trips were thought to be a more accurate representation than past 12 month recall, the reader is cautioned that a seasonal bias is possible in such reporting. If the past year measure were used rather than the past month (projected out for 12 months), the total number of trips would be approximately 872 million rather than 957 million trips.

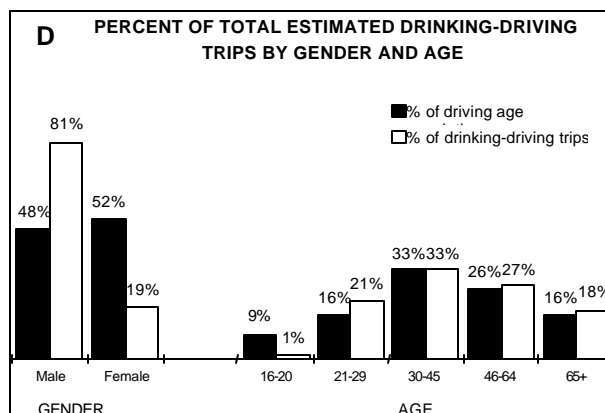
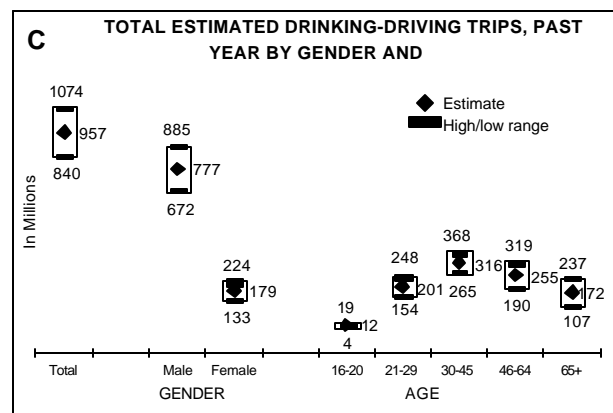
**FIGURE 2: NATIONAL ESTIMATES OF TOTAL DRINKING AND DRIVING TRIPS**



*Qx: In the past 30 days, how many times have you driven within two hours after drinking any*  
 [Base: past year drinking-driving trips\* (calculated by multiplying the mean reported number of trips by the number of



*Qx: In the past 30 days, how many times have you driven within two hours after drinking any alcohol?*  
 [Base: past year drinking-driving trips\* (calculated by multiplying the mean reported number of trips by the number of



\* A drinking-driving "trip" is defined as an occasion when a driver drove within two hours after drinking any alcohol.

\*\* Sample bases for this page:

Total drove after drinking past year n=1086

Male n=697, female n=389

16-20 n=29, 21-29 n=234, 30-45 n=462, 45-64 n=82; 65+ n=77

Sampling error range for total number of trips by gender and age (in millions of trips):

Total  $\pm 117$ ; male  $\pm 107$ ; female  $\pm 46$ ; 16-20  $\pm 7$ ; 21-29  $\pm 47$ ; 30-45  $\pm 52$ ; 46-64  $\pm 64$ ; 65+  $\pm 65$

Total drinking-driving trips were estimated by multiplying the number of drinking-driving trips in the past 30 days by 12 to yield a yearly estimate for each respondent. Total trips were summed across all respondents and data were projected to the total U.S. population age 16 or older.

### **Drinker-Drivers Vs. Other Drivers**

#### *Frequency of Drinking Past Year*

Those who report driving within two hours of drinking in the past year (drinker-drivers) consume alcoholic beverages significantly more often than do non-drinker-drivers. More than one in four (28%) drinker-drivers consumes alcoholic beverages three or more times a week, compared to just 12% of non-drinker-drivers who consume as often. [Figure 3-A].

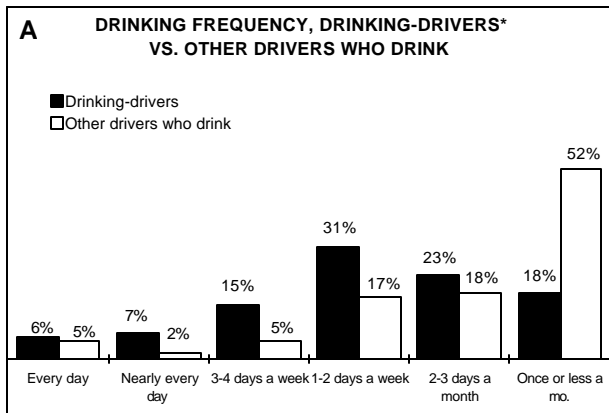
#### *Amount of Alcohol Consumed Per Sitting*

Drinker-drivers not only drink more often than other drivers who do not drink and drive; they also consume significantly more alcohol per sitting. Drinking-drivers report consumption of an average of 2.8 drinks per sitting as compared to 2.1 drinks per sitting for other drivers who drink. [Figure 3-B].

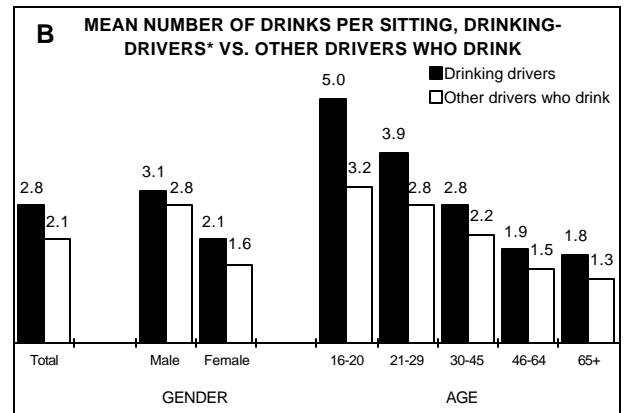
Males who drive within two hours of drinking alcohol are heavier drinkers than are other male drivers who drink, but do not drive. Male drinker-drivers average 3.1 drinks per sitting compared with 2.8 average drinks for those who do not drive after drinking. Drinker-drivers of all ages consume more per sitting than do other drivers who drink with younger drinker-drivers consuming considerably more drinks per sitting than their counterparts who do not drive after drinking alcohol. [Figure 3-B].



**FIGURE 3: FREQUENCY AND AMOUNT OF DRINKING FOR DRINKER-DRIVERS VS. OTHERS WHO DRINK**



Qx: During the last 12 months, how often did you usually drink any alcoholic beverages, including beer, light beer, wine, wine coolers, or liquor? Would you say you usually drank alcoholic beverages...?



Qx: When you drink [alcoholic beverage drunk most often] about how many [drinks] do you usually drink per sitting?

## Characteristics of the Most Recent Driving After Drinking Occasion

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In order to obtain the most accurate estimates of self-reported drinking-driving occasions, it is important to ask about the experience individuals are most likely to remember. To this end, drinker-drivers were asked detailed questions about their “most recent” drinking-driving experience. Although the most recent occasion may not be reflective of the typical trip for any one individual, in aggregate, information on the most recent trip provides us with a representation of drinker-drivers as a whole.

### **Location of Most Recent Drinking Occasion**

Restaurants and bars/taverns are the origin for the largest proportion of drinking-driving trips, with about one-quarter of drinker-drivers reporting drinking at one of these locations and then driving within two hours of that consumption. Other people’s homes and the drinker-driver’s own home are the starting point for about one in five most recent drinking-driving trips. [Figure 4-A].

### **Length of Time Drank on Most Recent Occasion**

On average, drinker-drivers consumed their alcoholic beverages over a period of nearly four hours on their most recent occasion of drinking-driving. Males consumed their drinks over a slightly longer period of time on average than did females (3.8 hours compared to 3.4 hours). The length of time one takes to consume one’s drinks prior to a drinking-driving occasion is lowest for very young and old drinker-drivers. [Figure 4-B].

### **Time Between Last Drink and Driving Start on Most Recent Occasion**

Drinker-drivers typically began driving within about 44 minutes of finishing their last drink. Females wait an average of about five minutes longer than do males before driving. Those age 46-64 report the longest period between their last drink and the start of their driving trip, averaging about 50 minutes prior to driving. [Figure 4-C].

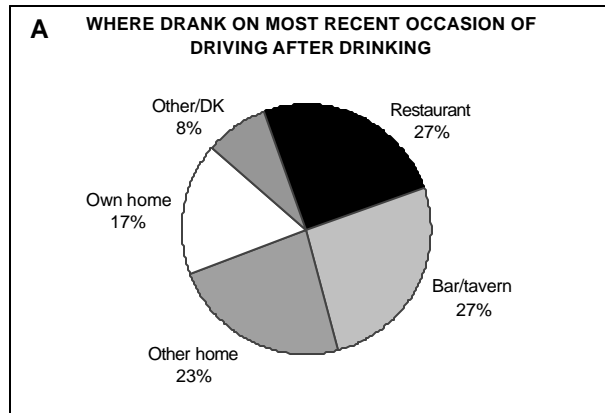
### **Self-Reported Status in Relation to Legal Limit on Most Recent Drinking- Driving Occasion**

About one in ten past-year drinker-drivers perceive that they were over the legal limit for operating a motor vehicle the last time they drove after consuming alcohol. [Figure 4-D] About 44% of those under the legal drinking age of 21 think that they were well over the limit on their last trip.

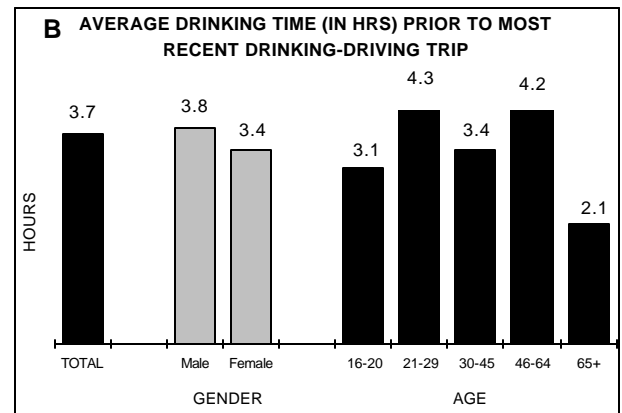
### **Miles Drove on Most Recent Occasion**

Drinking-driving trips average about 14.3 miles from origin to destination. Nearly one in four trips are of one mile or less, while 22% are of 11 or more miles. Persons in their 20s drive the longest distance on average after consuming alcohol, averaging 31 miles per trip. [Figure 4-E].

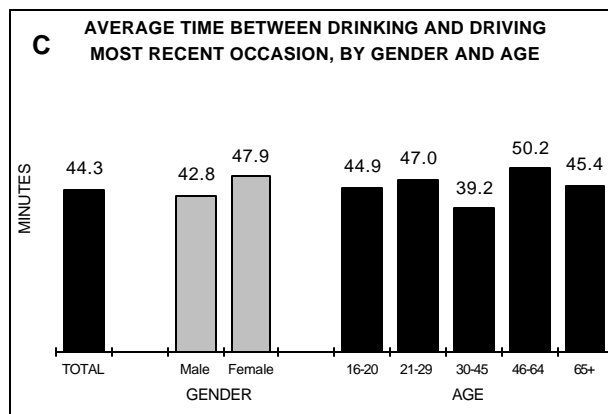
**FIGURE 4: MOST RECENT DRIVING AFTER DRINKING OCCASION**



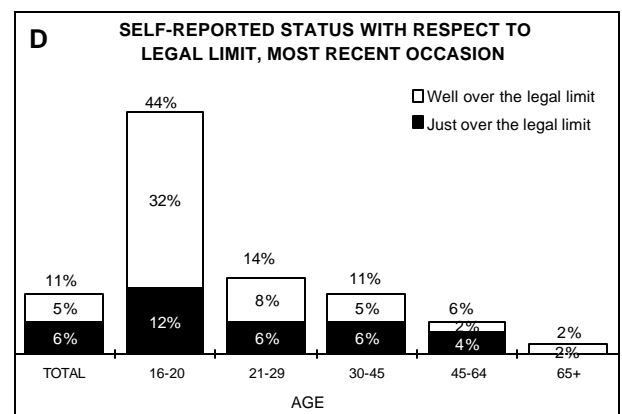
Qx: *Where did you drink on that occasion?* [Base: drove after drinking, past year]



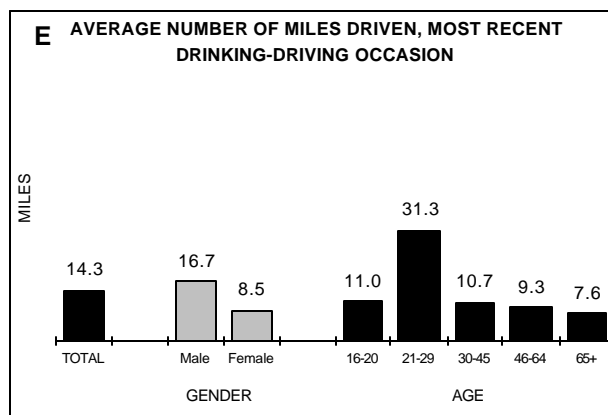
Qx: *Over what length of time (in hours) did you have those drinks?* [Base: drove after drinking, past year\*\*]



Qx: *How long (in minutes) after your last drink did you start driving?* [Base: drove after drinking, past year\*\*]



Qx: *On this most recent occasion, ... you were well below the limit for drinking and driving, just below, just over or well over the legal limit?* [Base: drove after drinking, past year\*\*]



Qx: *About how many miles did you drive on this occasion?* [Base: drove after drinking, past year\*\*]

\*\*Sample bases for this page:

Total drove after drinking 1+ time in past year n=1086

Male n=715, female n=246

Age, 16-20 n=27, 21-29 n=206, 30-45 n=440, 46-64 n=258, 65+ n=79

### **Number of Passengers on Most Recent Occasion**

Half (50%) of drinker-drivers have other passengers in the car with them during these trips. Including those who drive alone and those who drive with passengers, drinker-drivers travel with an average of .79 passengers per trip. Minors (under age 21) average the most passengers during drinking-driving trips with an average of 1.4 passengers. The number of passengers on a drinking-driving trip has direct impact on the number of persons affected by drinking-driver trips. [Figure 5-A]

### **Involving Passengers under Age 15**

One in twenty (5%) drinker-drivers drove with one or more persons under age 15 on their most recent drinking driving trip. Persons age 30 to 45 are the most likely to have driven with a child, with about 7% doing so. [Figure 5-B]

### **Involving Children Other Than Own**

Three in ten drinker-drivers who drove with children under age 15 in the vehicle on their last drinking-driving trip, transported children who were not their own children. [Figure 5-C]

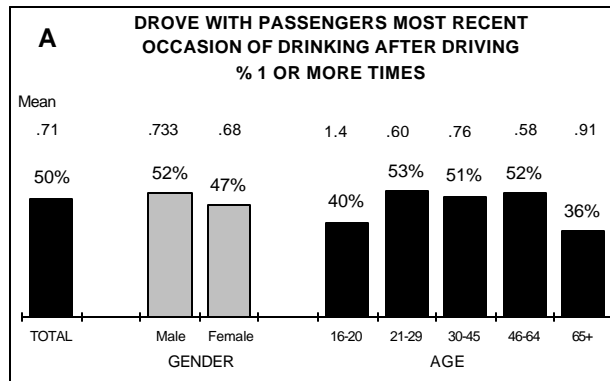
### **Estimated Drinking-Driving Trips Involving Children**

An estimated 46 to 102 million drinking-driving trips are made each year with children under age 15 in the vehicle. Persons age 30-45 make most of these drinking-driving trips which include children. [Figure 5-D]

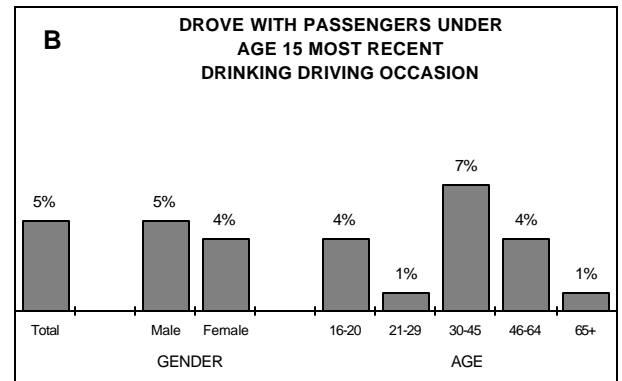
### **Lowering BAC Limit if Drive with Children**

Eight of ten (79%) persons of driving age agree that the legal BAC should be lower (stricter) for people who drive with children in their car. Drinker-drivers are less likely to agree that this should happen, but two-thirds still agree. Those whose most recent drinking-driving episode involved children are much less likely to feel that the legal limit should be stricter, with just 55% supporting a lower limit. [Figure 5-E]

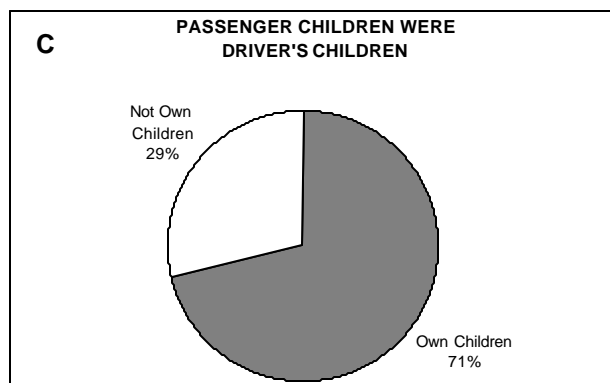
**FIGURE 5: INVOLVING OTHERS IN DRINKING-DRIVING OCCASSIONS**



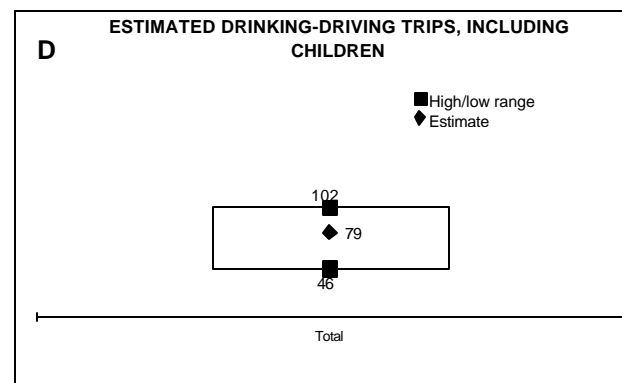
Qx: How many drinks did you have on that occasion? [Base: drove after drinking, past year\*\*]



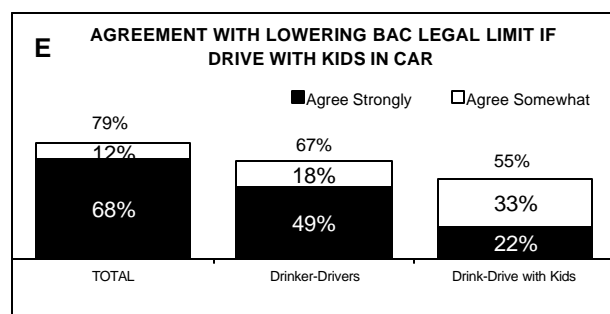
Qx: How many of these passengers were under age 15? [Base: drove after drinking, past year\*\*]



Qx: How many of these passengers were your own children? [Base: drove after drinking, past year with children under age 15 n=50] ++



Qx: In the past 30 days, how many times have you driven within two hours after drinking any alcohol? [Base: drove after drinking, past year with children under age 15 n=50]



Qx: The legal blood alcohol limit should be lower (stricter) for people who drive with children in their car. [Base: total respondents n=5733]

\*\* Sample bases for this page:

Total drove after drinking past year n=1086

Male n=715, female n=246

16-20 n=27, 21-29 n=206, 30-45 n=440, 45-64 n=258, 65+ n=79

++caution small sample size



### **Number of Drinks on Most Recent Occasion**

On average, drinker-drivers consumed about 2.7 alcoholic beverages on their most recent drinking-driving occasion. Males consumed slightly more drinks on average than did females (2.9 drinks compared to 2.1 drinks for females). The number of drinks consumed prior to a drinking-driving trip decreases steadily with age, with those over age 45 consuming two or fewer drinks on average. [Figure 6-A].

### **Number of Drinks by Those 16- 20**

While it may appear that younger drivers do not contribute greatly to the drinking-driving problem based solely on the number of trips they make [Figure 2-C], when the amount of alcohol consumed and the time period of consumption prior to driving are considered, it becomes more apparent why younger drivers appear as a problem in alcohol-related crashes. Those under age 21 drank an average of 6.3 drinks on their most recent drinking-driving occasion, while 21- to 29-year-olds report consumption of about 3.3 drinks. In contrast, those age 46 or older consumed an average of two or fewer drinks on their last drinking-driving occasion.

### **Estimated BAC Levels on Most Recent Occasion**

To obtain impairment severity estimates of drinking-driving trips, Blood Alcohol Concentration (BAC) levels were estimated for the most recent drinking-driving occasion of each person who had driven within two hours of alcohol consumption in the past year (see page 4).

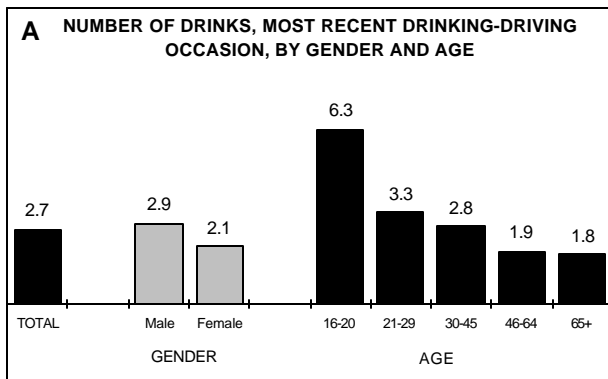
The average calculated BAC level among past-year drinker-drivers was .03 for the most recent drinking-driving occasion. Males' and females' average BAC was the same (.03) for the most recent trip. Average estimated BAC levels decline with age. BAC levels are highest among those age 16-20, with an average BAC among this group of .10. [Figure 6-B]

BAC levels are highest for persons who drank at a bar or tavern and then drove (.04 average) and for those who drank at a friend's home (BAC .03). [Figure 6-C]

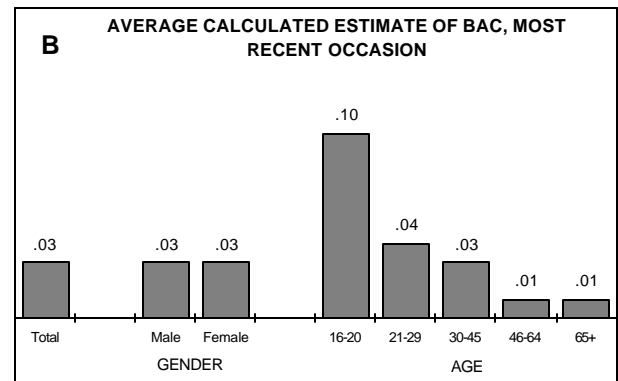
Drinker-drivers generally underestimated their own BAC level in relation to the legal limit. Persons who deemed themselves to be "well over the legal limit" were estimated to have an average BAC of .11, whereas persons who felt they were just over or just at the limit were at .06 and those who thought they were just below the limit were at .03. [Figure 6-D]

Overall, the vast majority (87%) of drinker-drivers are well below the legal BAC limit for adults when they drive within two hours of consuming alcohol. Less than one in ten (8%) drive with BAC levels between .05 and .079. About one in twenty (5%) drinker-drivers take trips with a BAC at or above .08. [Figure 6-E]

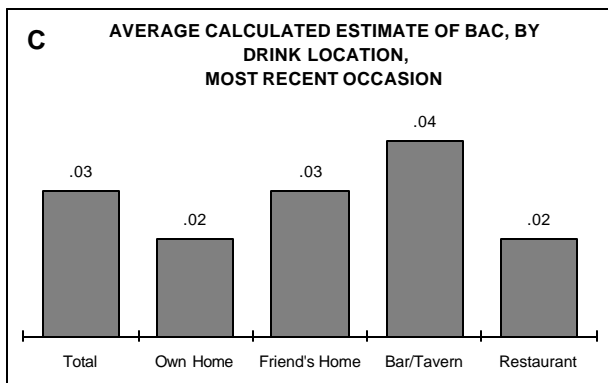
**FIGURE 6: CALCULATED ESTIMATE OF BAC (BLOOD ALCOHOL CONCENTRATION) FOR MOST RECENT DRINKING-DRIVING OCCASION**



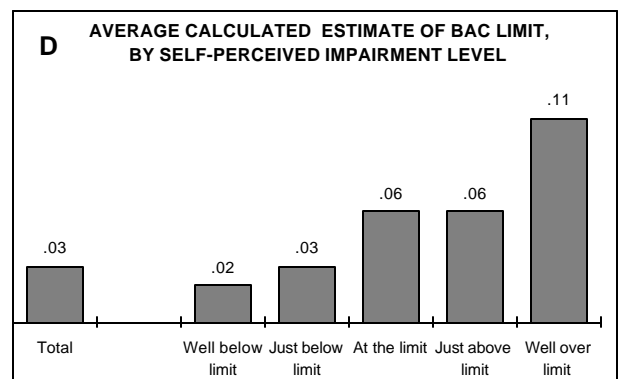
Qx: How many drinks did you have on that occasion? [Base: drove after drinking, past year\*\*]



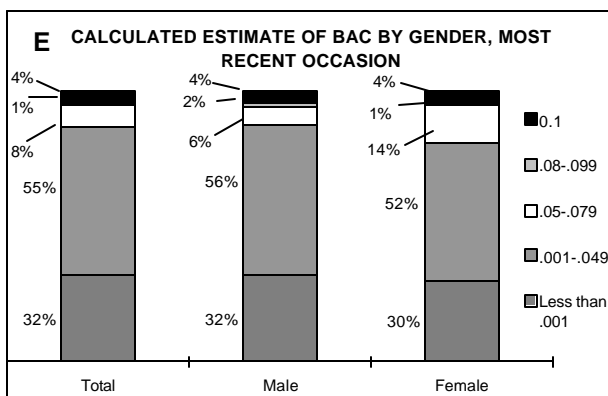
Qx: On this most recent occasion, ... how many drinks did you have? How long after your last drink did you start driving? Over what time period did you have those drinks? Gender, Age and Weight [Base: drove after drinking, past year\*\*]



Qx: Where did you drink on that occasion? [Base: drove after drinking, past year\*\*]



Qx: On this most recent occasion, were you well below the limit for drinking and driving, just below, just over or well over the legal limit? [Base: drove after drinking, past year\*\*]



BAC (blood alcohol concentration) calculated using NHTSA BAC estimation formula using gender, weight, number of drinks consumed, length of time drinking, and length of time between last drink and driving.

\*\* Sample bases for this page:

Total drove after drinking past year n=1086

Male n=715, female n=296

16-20 n=27, 21-29 n=206, 30-45 n=440, 46-64 n=258, 65+ n=79

Well below limit n=578, Just below limit n=276, Just at limit n=11, Just over limit n=44, Well over limit n=50



## Estimated Total Drinking-Driving Trips by Calculated BAC Level

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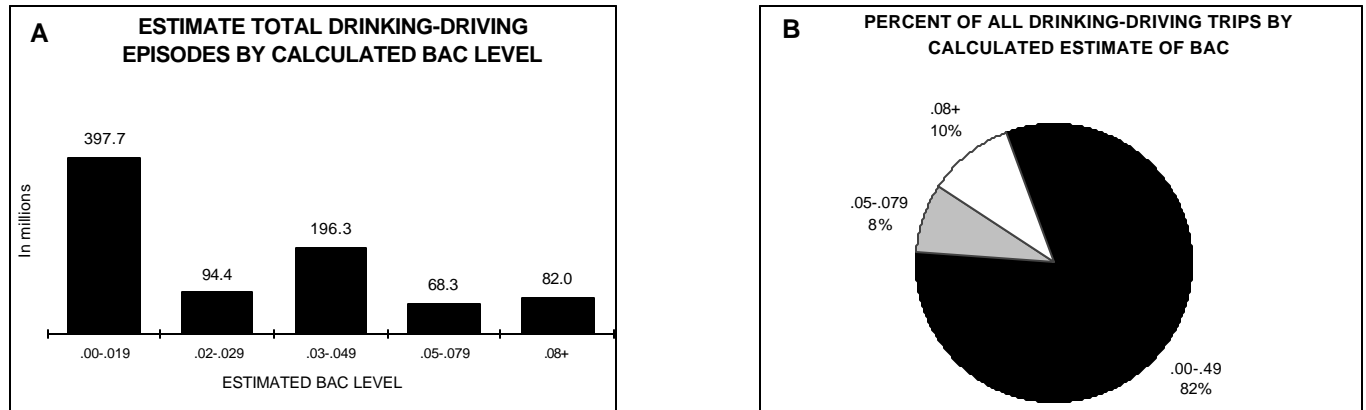
### **Total Drinking-Driving Trips by Estimated BAC**

The vast majority of drinking-driving trips are made by persons with estimated BAC levels below .05. However, an estimated 82 million ( $\pm 39$  million) drinking-driving trips were made in 1999 by drivers with estimated BAC levels of .08 or greater. An estimated 113 million ( $\pm 56$  million) trips were made by drivers impaired at a BAC of .05 to .079. [Figure 7-A] Again, these figures are estimates and offer an approximation of the magnitude of impaired-driving trips. The error range around the trip estimates for each BAC level appear at the bottom of Figure 7.

### **Percent of All Trips by Estimated BAC Level**

While only about 5% of drinker-drivers operated a motor vehicle with a BAC level of .08 or higher [Figure 6-D], about one out of every ten (10%) drinking-driving trips is estimated to be made by a driver with a BAC level of .08 or greater. An additional estimated 8% of drinking-driving trips are made at BAC between .05 and .079. [Figure 7-B]

**FIGURE 7: ESTIMATED TOTAL DRINKING-DRIVING TRIPS BY CALCULATED BAC LEVEL**



Sample bases for this page: BAC .00-.019 n=500, BAC .02-.029 n=163, BAC .03-.049 n=169, BAC .05-.079 n=99, BAC .08+ n=76.  
 Error range for total number of trips by estimated BAC level (in millions of trips): BAC .00-.019  $\pm 73$ , BAC .02-.029  $\pm 29$ , BAC .03-.049  $\pm 59$ , BAC .05-.079  $\pm 25$ , BAC .08+  $\pm 39$ .

BAC (blood alcohol concentration) calculated using NHTSA BAC estimation formula using gender, weight, number of drinks consumed, length of time drinking, and length of time between last drink and driving.

### Defining CAGE Measures

A series of questions was asked of people who drank alcohol in the past year to help identify problem drinking. This series of four questions is represented by the acronym “CAGE” (Ewing, 1998) with each letter representing one of the four questions: “Have you felt you should cut down on your drinking?” (“C” for “cut down”); “Have people annoyed (“A”) you by criticizing you about your drinking?”; “Have you felt bad or guilty (“G”) about your drinking?”; “Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover?” (“E” for “eye-opener”).

### Differences by Gender and Age

Males are more likely than females to say “yes” on each of the CAGE measures. About one in four males feel that they should cut down on their drinking, 7% are annoyed by others’ criticism of their drinking, and 11% have felt bad or guilty about their drinking. Only 3% of the drinking public has had a drink first thing in the morning to steady their nerves or get rid of a hang over. [Figure 8-A]

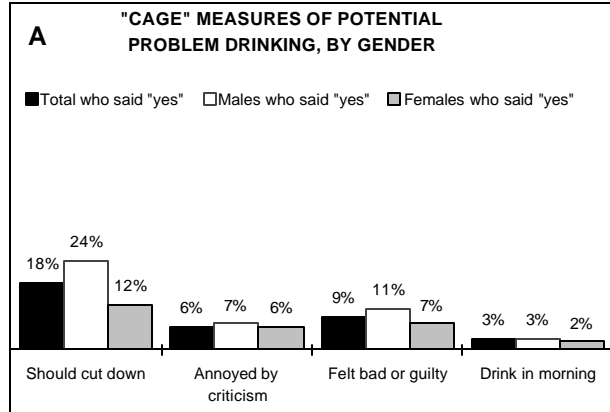
Those under age 21 are generally most likely to say yes to the CAGE measures, and agreement generally decreases with age. [Figure 8-B]

### Identifying Heavy and Binge Drinkers

One in thirty (3%) persons of driving age has consumed eight or more drinks in a single day during a typical 28-day period. Males (6%) and persons under age 30 (8%) are the most likely to report this type of binge drinking. [Figure 8-C]

About 7% of those age 16 or older report consuming five or more drinks on four or more days of a typical 30-day month. Males (10%) and persons under age 30 (8%) are twice as likely to report four or more days of heavy drinking. [Figure 8-D]

**FIGURE 8: IDENTIFYING PROBLEM DRINKERS**



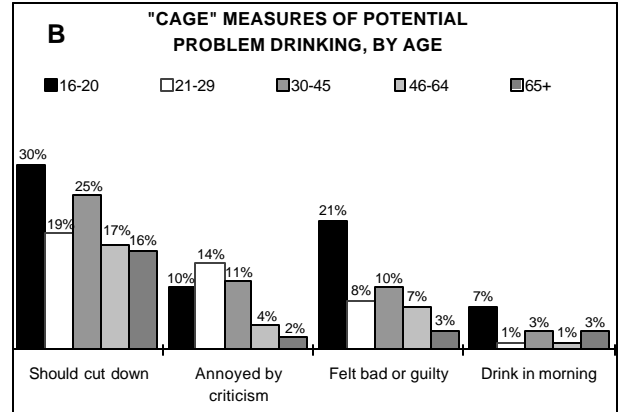
Qx: Have you felt you should cut down on your drinking? ("C")

Qx: Have people annoyed you by criticizing your drinking? ("A")

Qx: Have you felt bad or guilty about your drinking? ("G")

Qx: Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover? ("E")

[Base: Drank alcohol in past year, n=3493, male n=1644, female n=1849]



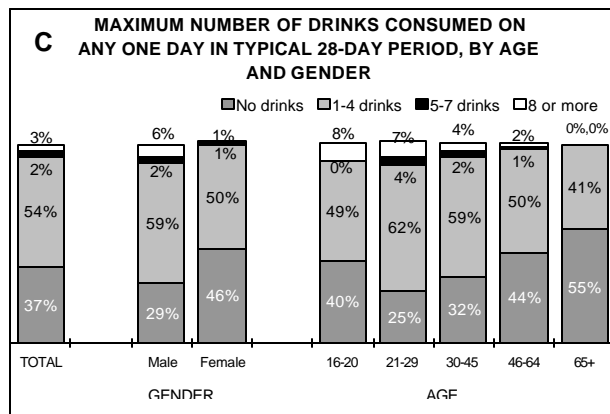
Qx: Have you felt you should cut down on your drinking? ("C")

Qx: Have people annoyed you by criticizing your drinking? ("A")

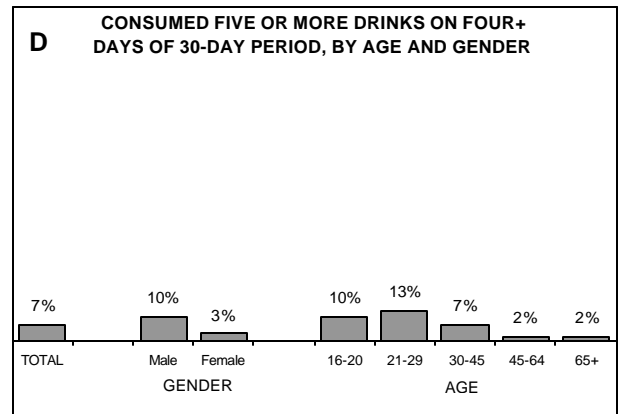
Qx: Have you felt bad or guilty about your drinking? ("G")

Qx: Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover? ("E")

[Base: Drank alcohol in past year, total n=3493]



Qx: People often drink different amounts of alcohol depending on the time, place or occasion. On some days they may drink small amounts, on some days they may drink medium amounts, and on other days they may drink large amounts. Think about the days when you drank alcohol during a typical four-week period (30 days) in the past six



\*Drinking-drivers: Drove within two hours after drinking in the past year.

\*Drinking-drivers: Drove within two hours after drinking in the past year.

\*\*Sample Bases for this page: Drank alcohol past year n=3493  
Male n=1644, Female n=1849

Age 16-20 n=176, 21-29 n=649, 30-45 n=1279, 46-64 n=975, 65+ n=406

### **Defining Problem Drinkers**

For this analysis “problem drinkers” were defined as expressing agreement (“yes”) to two or more of the four CAGE measures, or having consumed five or more drinks on four or more days in a typical 28-day period, or consumed eight or more drinks (nine for males) on at least one day in a typical 28-day period.

Overall, about 23% of the drinking public age 16 or older can be classified as a “problem drinker.” This is true of 23% of past year drinker-drivers and 11% of others who consume alcohol.

Three of four (74%) problem drinkers are male. While 21- to 29-year-olds make up 16% of the driving age public, they account for 34% of all problem drinkers. Those age 16-20 are also over-represented among problem drinkers. These youth are 9% of the driving age public, but 15% of problem drinkers. [Figure 9-A]

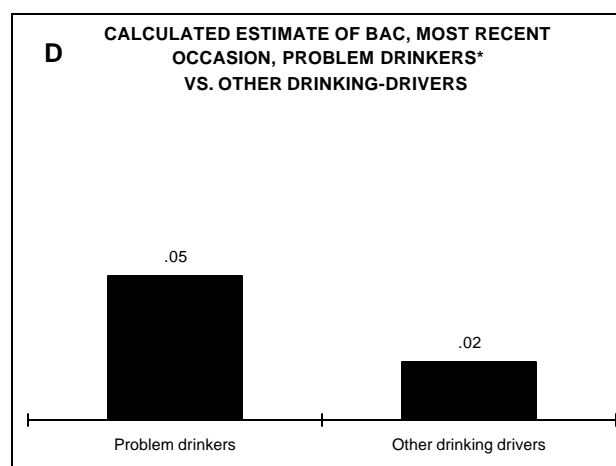
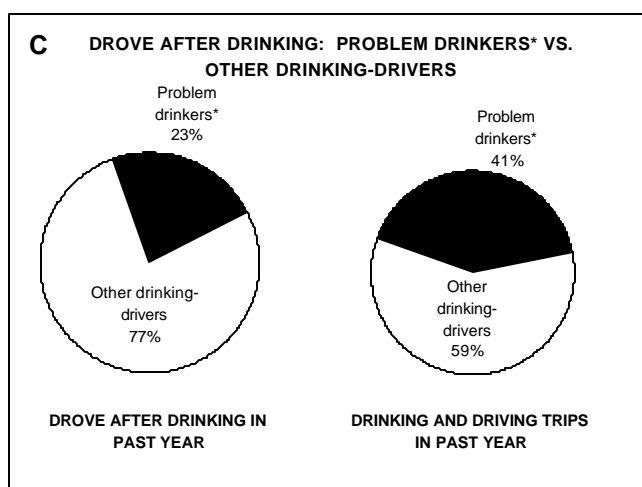
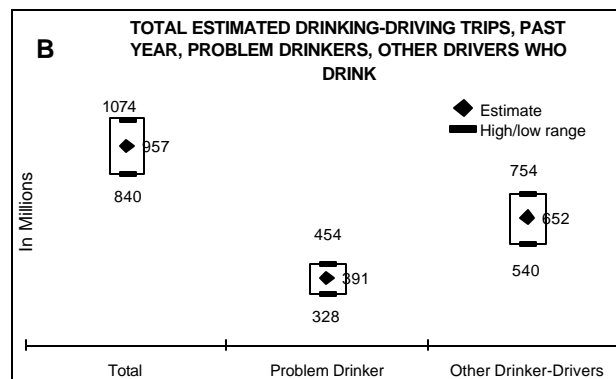
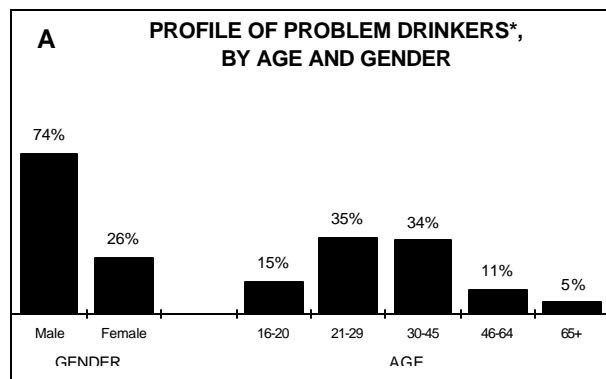
### **Problem Drinkers Contribution to Drinking- Driving Trips**

While problem drinkers make up about 23% of all past-year drinker-drivers, they account for about 41% of all trips (or between 328 and 454 million drinking-driving trips) in 1999. Other drivers who drink made between 540 and 754 million trips. [Figure 9-B]

### **Estimated Calculated BAC Level of Problem Drinkers vs. Other Drinking Drivers**

Problem drinkers are estimated to drive with BAC levels of more than twice that of other drinking-drivers. On their most recent drinking-driving trip, problem drinkers were estimated to have a calculated BAC level of about .05 as compared to a calculated BAC level of about .02 for other drivers who drink alcohol. [Figure 9-D]

**FIGURE 9: PROBLEM DRINKERS**



Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? ["Yes" = drinking-drivers]

Qx: About how many times in the past 12 months would you say that you have driven within two hours after drinking any alcohol? [each time= 1"trip"]

\* "Problem drinkers" are defined as those who meet at least ONE of the following three conditions:

- (a) said "yes" to two or more of the "CAGE" measures;
- (b) consumed five or more drinks on four or more days in a typical four-week period; or
- (c) for females, consumed eight or more drinks on a given day in the past four weeks, or for males, consumed nine or more drinks on a given day in the past four weeks.

(Ewing, 1984; Skinner and Holt, 1987).

Sample bases for this page:

Total drinker-drivers n=1086

Problem drinker n=290

Other drinker-drivers n=796

## Riding with Unsafe Drivers

---

One of ten persons age 16 or older has ridden with a driver they thought may have consumed too much alcohol to drive safely. Approximately equal proportions of males and females have ridden with a potentially unsafe driver. Those under age 20 are most likely to have been a passenger with someone they thought might have drunk too much to drive safely (about 28%). Riding with a potentially unsafe driver decreases consistently with age. [Figure 10-A]

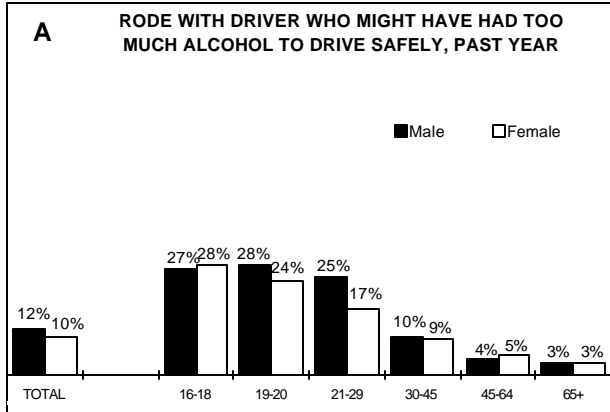
Drivers who drink report being the passenger in a vehicle with a driver who may have consumed too much alcohol to drive safely at a rate of five times that of drivers who do not drink. [Figure 10-B] This is likely a function of drinking in groups (especially among younger drivers) and then designating one of those drinkers to drive.

### **When Decided Driver Was Unsafe**

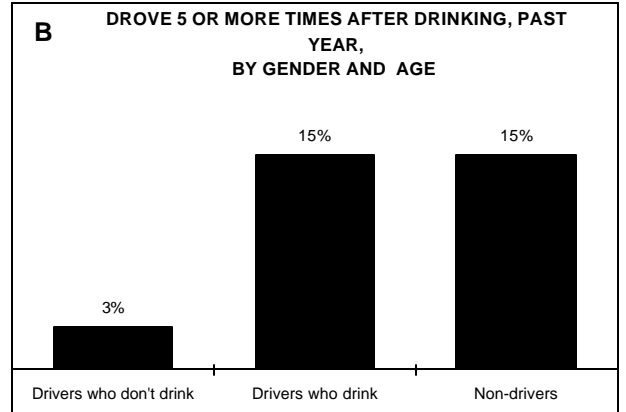
Four in ten persons who have ridden with someone they thought may have drunk too much to drive safely made this assessment *before* they were riding in the vehicle, yet they decided to go with the driver anyway. [Figure 10-C] Males and females, and persons of all age groups are about equally likely to have made this decision prior to entering the vehicle. [Figure 10-D]



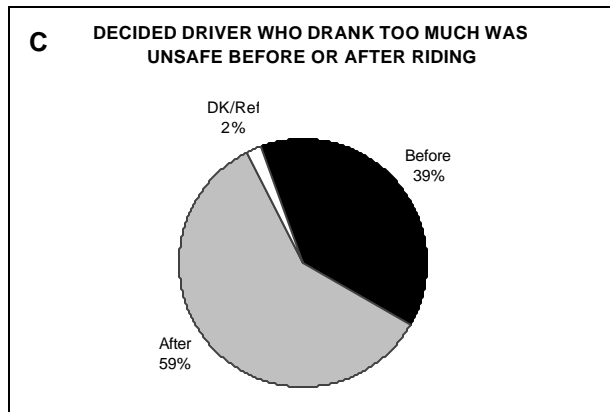
**FIGURE 10: RIDING WITH UNSAFE DRIVERS**



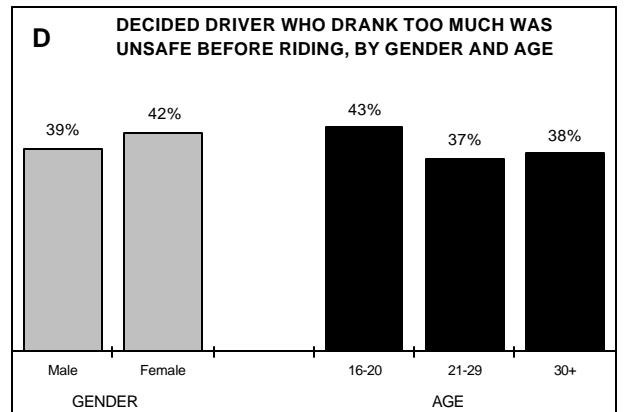
Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents]



Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: drivers who don't drink n=1251, drivers who drink n=964, non-drivers n=285]



Qx: *Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the vehicle?*  
(Base: rode with driver who may have consumed too much alcohol to drive safely, past year)



Qx: *Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the vehicle?*  
(Base: rode with driver who may have consumed too much alcohol to drive safely, past year)

\* A drinking-driving "trip" is defined as an occasion when a driver drove within two hours after drinking any alcohol.

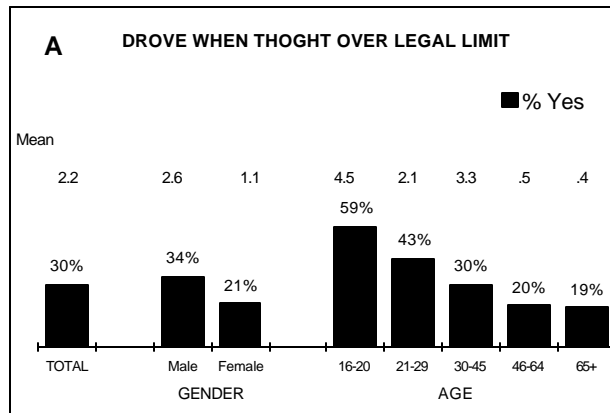
### **Drove When Thought Over Legal Limit**

Three in ten (30%) drinker-drivers report that they drove at least once when they thought they were over the legal limit. Males (34%) are more likely than females (21%) to have driven when they thought they were over the legal limit. Six of ten (59%) persons under age 21 report such activity. The proportion of person who drove when they thought they were over the legal limit declines with age. [Figure 11-A]

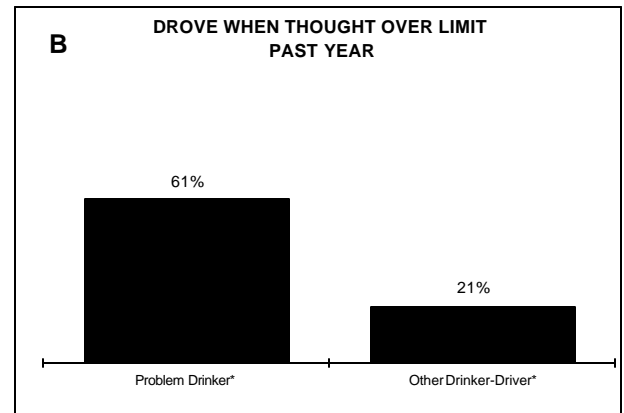
Problem drinkers are three times as likely as other drinker-drivers to have driven when they thought they were over the legal limit. [Figure 11-B]

Those driving when they thought they were over the legal limit report consuming an average of more than six drinks. Minors report consuming the greatest number of drinks, averaging about eight drinks before driving. [Figure 11-C]

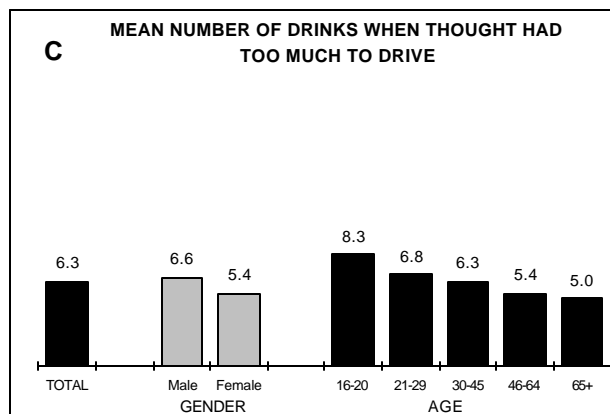
**FIGURE 11: DRIVING WHEN THOUGHT OVER LEGAL LIMIT**



Qx: About how many times in the PAST TWELVE MONTHS did you drive when you thought you were over the legal limit for alcohol? [Base: drinking drivers\*]



Qx: About how many times in the PAST TWELVE MONTHS did you drive when you thought you were over the legal limit for alcohol? [Base: drinking drivers\*]



Qx: Thinking about the most recent occasion when you have drank enough to place you over the legal limit, whether or not you drove, how many drinks did you have?

\*\*Sample bases for this page:

Drinking drivers:

Male 16-20 n=70, 21-29 n=244, 30-45 n=462, 46-64 n=320, 65+ n=130

Female 16-20 n=67, 21-29 n=205, 30-45 n=524, 46-64 n=323, 65+ n=117



## Chapter 2: Perceptions of Drinking and Driving as a Problem

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In addition to measuring drinking and driving behaviors, this study examines the driving age public's perceptions on a number of topics related to drinking and driving. Changes in these perceptions can eventually lead to personal changes in drinking and driving behaviors (both improvements and declines) and in actions towards others. This section provides feedback on perceptions of the following issues:

- Relative importance of drinking and driving to other major issues in United States
- How much drinking and driving by others is a threat to self and family's personal safety
- The importance of reducing drinking and driving and support for zero tolerance
- Drinker-drivers as alcoholics or problem drinkers
- Whether people should not be allowed to drive if they drink any alcohol
- The number of drinks a person could drink before he/she should not drive

## The Importance of Reducing Drinking and Driving and Support for Zero Tolerance

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The driving age public sees drinking and driving as a serious problem that needs to be dealt with. Eight of ten (80%) persons see drinking and driving of others as a major threat to the personal safety of themselves and their family. [Figure 12-A] The majority of all age groups and both males and females hold this belief.

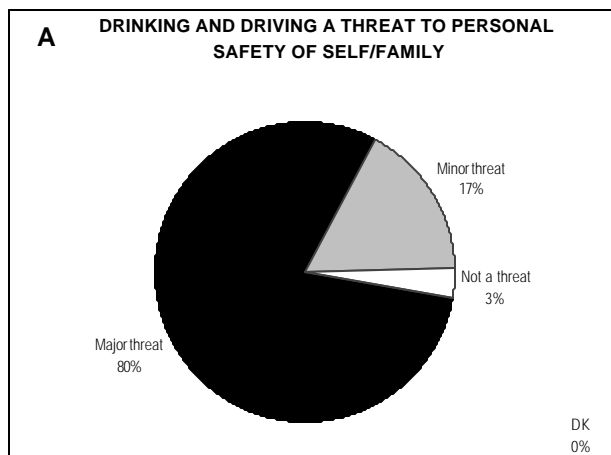
About one in fourteen (7%) persons of driving age sees “drunk driving” as the most important problem facing the country today. While issues such as general crime and violence (16%), general moral decline (19%) and drugs (13%) rate higher than drunk driving in the minds of the majority of the general public, drunk driving rates ahead of issues such as healthcare, poverty/hunger, racism and education. [Figure 12-B]

Three-quarters (73%) of persons of driving age feel that reducing drunk driving is extremely important in terms of where tax dollars should be spent. An additional 23% feel it is somewhat important. Females are much more likely to feel that reducing drunk driving is extremely important. [Figure 12-C] Not surprisingly, drinker-drivers are much less likely to feel that reducing drunk driving is extremely important (54%) than are other drivers who also sometimes drink, but have not driven within two hours of consuming alcohol (74%).

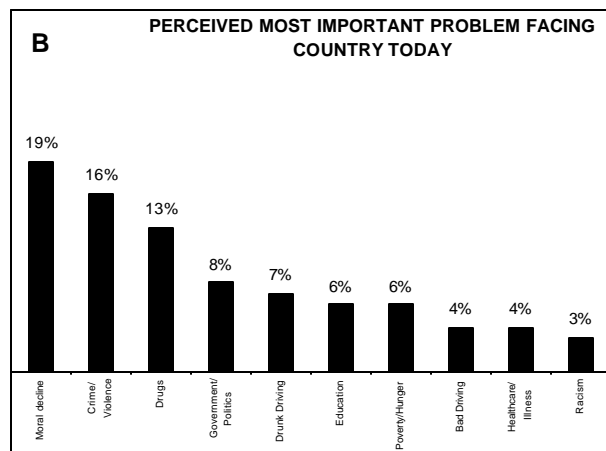
The majority of the driving age public is supportive of “zero tolerance” for drinking and driving. About 47% strongly agree that people should not be allowed to drive if they have consumed any alcohol at all, and an additional 21% somewhat agree with this statement. [Figure 12-D]. Past-year drinker-drivers are significantly less likely than others to agree with this “zero tolerance” perspective. [Figure 12-E]

It is useful to note that while 20% of drinker-drivers strongly agree that people should not be allowed to drive if they have consumed any alcohol, all of these persons report that they have done so in the past year.

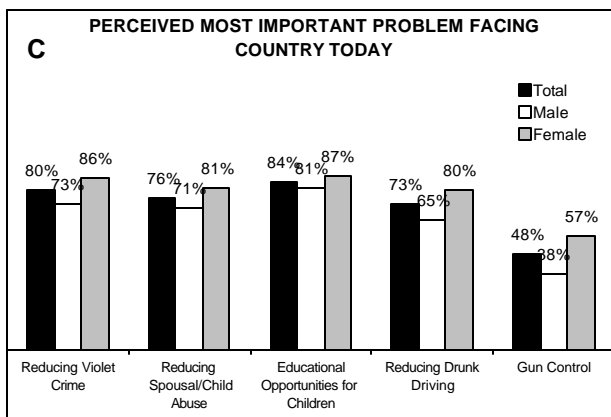
**FIGURE 12: THE IMPORTANCE OF REDUCING DRINKING AND DRIVING AND SUPPORT FOR ZERO TOLERANCE**



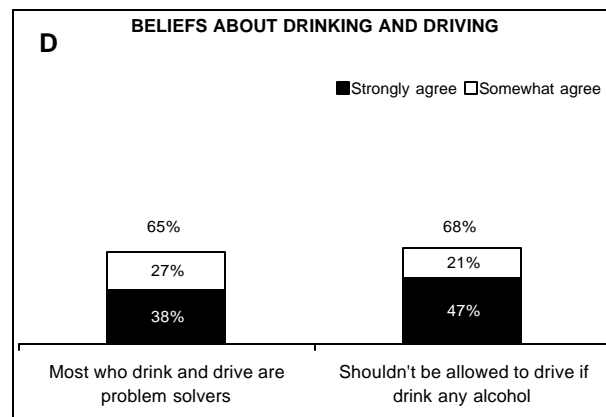
Qx: In your opinion, how much is drinking and driving by other people a threat to the personal safety of you and your family? [Base: all respondents n=5733]



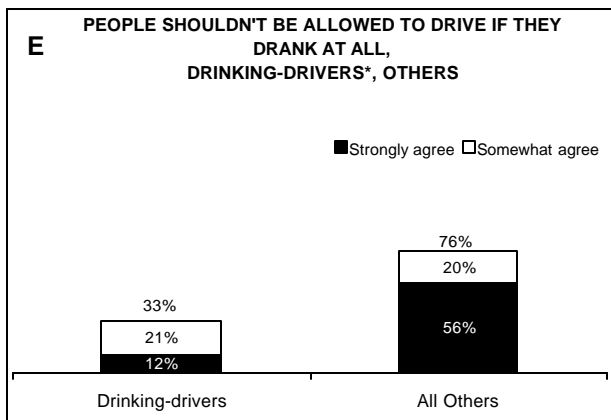
Qx: What do you think is the most important issue facing this country today? [Base: all respondents n=5733]



Qx: Please tell me if you think this is extremely important, somewhat important, not very important or not at all important in terms of where tax dollars should be spent. [Base: all respondents n=5733]



Qx: For [each of] the following statement[s], please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. People should not be allowed to drive if they have been drinking any alcohol at all. Most people who drive after drinking too much are alcoholics or problem drinkers. [Base: all respondents n=5733]



Qx: For [each of] the following statement[s], please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. People should not be allowed to drive if they have been drinking any alcohol at all. Most people who drive after drinking too much are alcoholics or problem drinkers. [Base: Drinking-drivers n=1215, other n=4059]

## Number of Drinks Before One Should Not Drive

---

Drivers who drink were asked to estimate the number of alcoholic beverages they could drink in two hours to reach the point where they should not drive. Nearly two-thirds (63%) of drivers who consume alcohol feel that they should not drive if they have had two or fewer drinks within a two-hour period. More than one-third (35%), place their personal limit (after which they should not drive) at one or fewer drinks. [Figure 13-A] The average 170-pound male would be at about a .03 BAC after consuming 2 drinks within two hours.

### Differences By Gender and Age

Male drivers under age 20 who drink alcohol perceive their personal limit to be much higher than do older adults or their female counterparts. Males under age 20 say they could drink up to an average of almost five drinks within a two-hour period before they reach the level at which they should not drive. In contrast, older males generally consider their safe limit to be about 2.7 drinks, while females put their limit at about two drinks on average. [Figure 13-B]

### BAC Equivalents to Personal Limits by Age and Gender

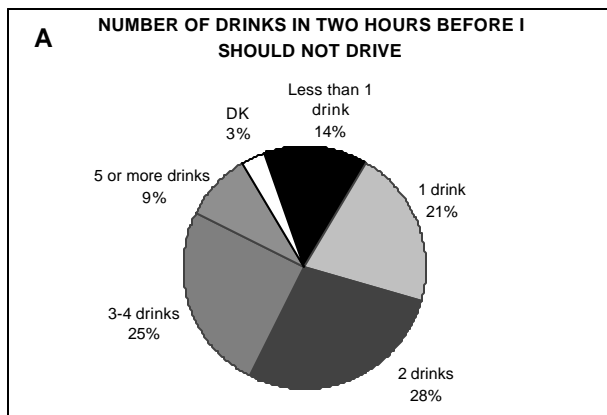
When these perceived self-limits are viewed in terms of the estimated resulting BAC level if a person of average weight for that gender and age group drank the reported number of drinks, those under age 21 would be near a BAC level of .09. Males under age 21 would be over .10 while females would be near a .07 BAC. [Figure 13-C]. Older persons perceive their personal limit of alcohol before they should not drive at a level that would put them at a BAC level of .03-.04 on average.

### Drinker-Drivers vs. Other Drivers Who Drink

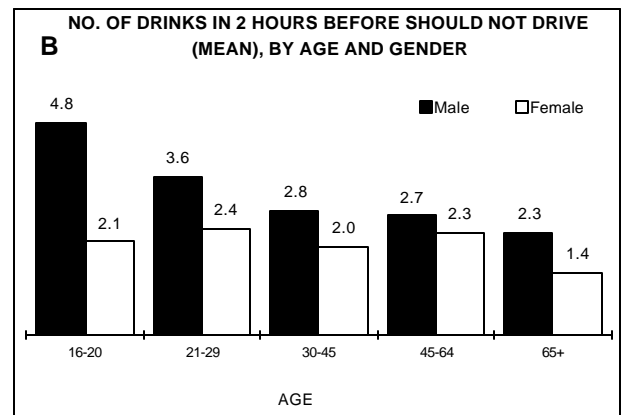
Drinker-drivers feel they can drink up to about three drinks in two hours before they should not drive. Other drivers who drink feel their safety limit is about one-third less than that of drinker-drivers, or just over two alcoholic drinks. [Figure 13-D]



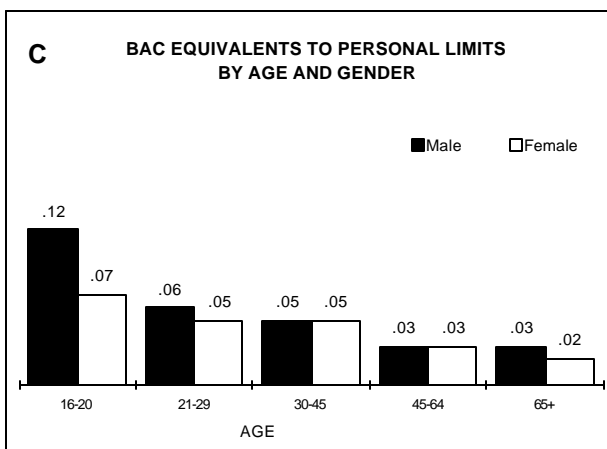
**FIGURE 13: NUMBER OF DRINKS BEFORE ONE SHOULD NOT DRIVE**



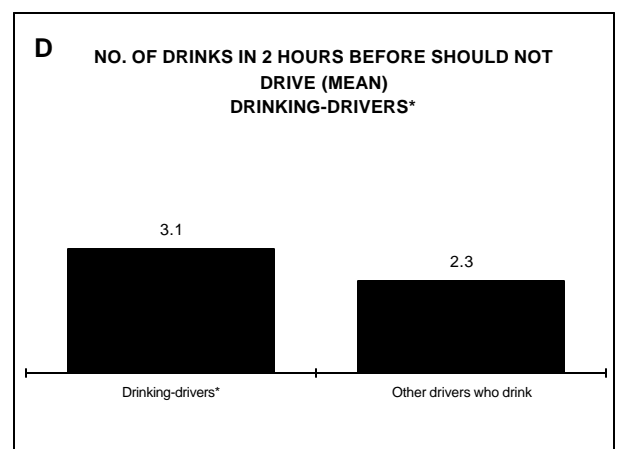
Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Base: drivers who drink\*\*]



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Base: drivers who drink\*\*]



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? (BAC level was calculated using average reported personal limit and average body weight for each age and gender category) [Base: drivers who drink\*]



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Base: drinking-drivers n=1215, other drivers who drink n=2156]

\* Drinking-drivers: Drove within two hours after drinking in the past year.

\*\*Sample bases for this page:

Drivers who drink:

Male 16-20 n=77, 21-29 n=310, 30-45 n=628, 46-64 n=411, 65+ n=171

Female 16-20 n=87, 21-29 n=319, 30-45 n=627, 46-64 n=538, 65+ n=200

## Chapter 3: Prevention and Intervention to Reduce Drinking and Driving

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This section considers actions people can take to reduce drinking and driving trips for themselves and others. Drinking-driving trips can be reduced through several methods, including prevention actions before an occasion that averts planned drivers from drinking alcoholic beverages at the event, and prevention actions to avert planned drinkers from driving. Such trips can also be reduced through the intervention actions by those who suspect that another person has already consumed too much alcohol to drive safely and halting the unsafe driving behavior.

Specifically, this section covers the following topics:

- Avoiding driving when had too much alcohol to drive safely
- Actions to avoid driving after consuming too much alcohol to drive safely
- Concerns and actions as host of social event to prevent guests from driving home impaired
- Use of designated drivers
- Intervention with friends who may not be safe to drive

## Avoided Driving After Drinking Too Much

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### **Drinker-Drivers vs. Other Drivers Who Drink**

Almost half (47%) of all past-year drinker-drivers have avoided driving a motor vehicle at least once because they felt they may have drunk too much to drive safely. This includes 85% of problem-drinkers and more than one-third of non-problem drinker-drivers. [Figure 14-A]

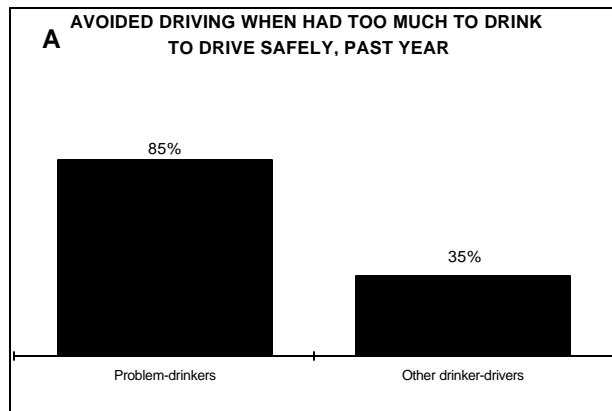
### **Gender and Age Differences**

Males and females are equally likely to have deliberately avoided driving when they thought they had too much to drink. Minors under age 21 are most likely to have avoided driving after drinking. Avoidance of driving after thinking one had drunk too much drops off sharply after age 30, and continues to decrease consistently with age. [Figure 14-B] This may be because older respondents are drinking less and are not putting themselves in a position where they have drunk too much.

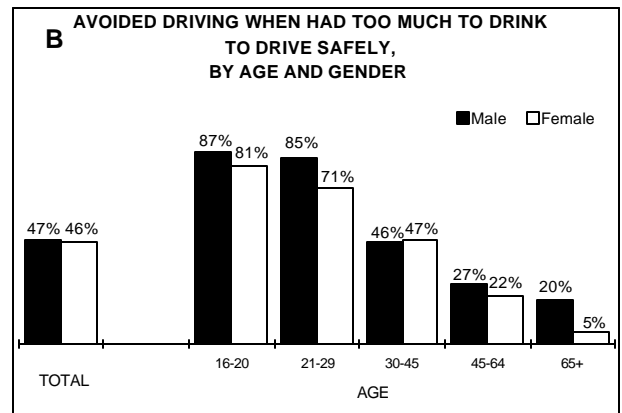
### **Actions to Avoid Driving After Drinking Too Much**

Six in ten of those who avoided driving after drinking too much, did so by riding with another driver. About 12% stayed the night to avoid driving after drinking. [Figure 14-C]. Staying overnight to avoid driving after drinking was used by about 32% of those under age 21, and decreases steadily with age. [Figure 14-D]

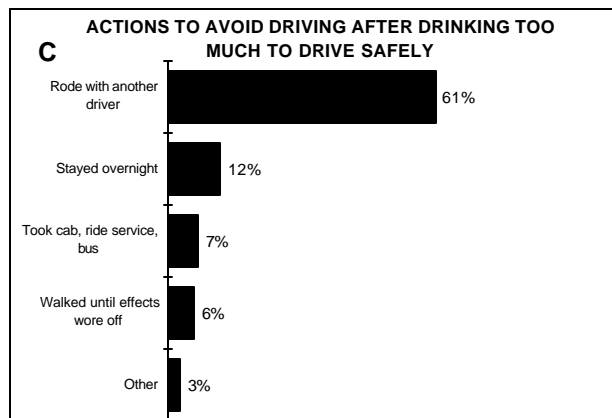
**FIGURE 14: AVOIDED DRIVING AFTER DRINKING TOO MUCH**



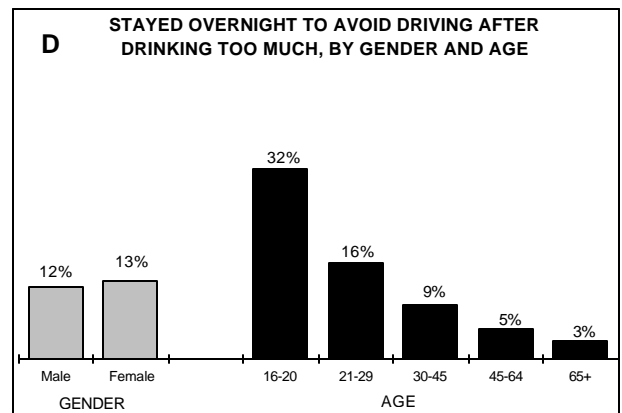
Qx: In the past 12 months, have you ever deliberately avoided driving a motor vehicle because you felt you probably had too much to drink to drive safely? [Base: problem-drinkers n=290, other drinker-drivers n=925]



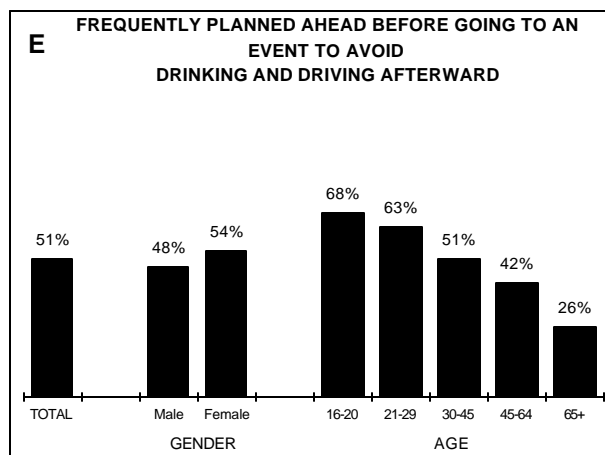
Qx: In the past 12 months, have you ever deliberately avoided driving a motor vehicle because you felt you probably had too much to drink to drive safely? [Base: drivers who drink, total n=2451]



Qx: On the most recent time that you deliberately avoided driving after drinking, how did you do it? [Base: avoided driving after drinking, past year, total n=345]



Qx: On the most recent time that you deliberately avoided driving after drinking, how did you do it? [Base: avoided driving after drinking, past year n=345]



Qx: How often did you plan ahead before going to an event to avoid drinking and driving afterward? [Base: total respondents\*\*]

### **Hosting a Social Event and Served Alcohol**

About 47% of those age 16 and older have hosted a social event in the past year at which they served alcohol. [Figure 15-A] Adults between 19 and 29 years of age are the most likely to have hosted such events; however, 38% of those under age 21 held an event where they served alcohol.

### **Hosts' Concern Over Having Guests Driving Home Impaired**

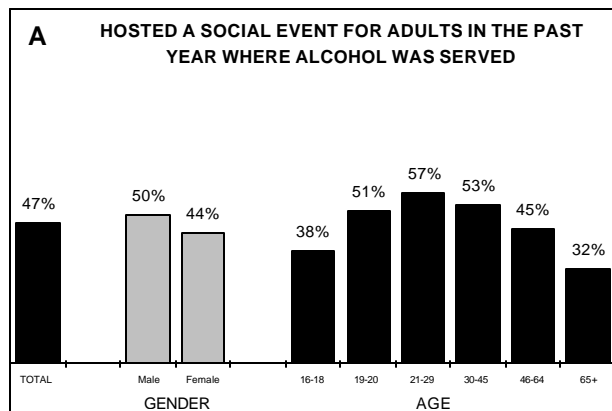
About two-thirds of all hosts who held an event at which they made alcohol available were very or somewhat concerned about having guests drive home impaired. Concerns were highest among hosts under age 21, of whom 87% express concern, and diminish with the age of the host. [Figure 15-B]

### **Actions Taken by Hosts**

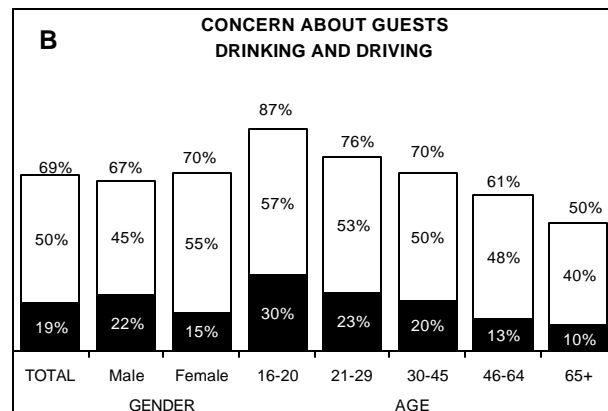
About 80% of those who served alcohol at a social event said they took some action to prevent guests from driving home impaired. Preventive actions were more likely to be taken by females and by younger hosts. The pattern of taking actions declining with age, follows the pattern of declining concern about guests drinking and driving by age. [Figure 15-D]

Having guests who may have been too impaired to drive safely spend the night and having someone else take the potentially impaired guest home are the most cited preventive actions taken by hosts, with 30% of all hosts reporting each action. Additionally, 10% say they drove the guest home themselves. About 18% report collecting keys of guests, with those in their teens and 20's most likely to employ this method. About 13% of hosts served less alcohol at their event or limited serving hours, while 4% reported they served food to help avert potential drinking-driving problems with guests. [Figure 15-C].

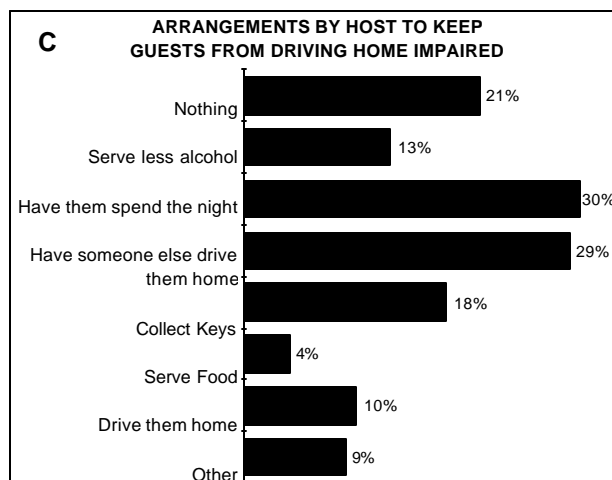
**FIGURE 15: CONCERNS AND ACTIONS BY HOSTS TO PREVENT GUESTS FROM DRIVING IMPAIRED**



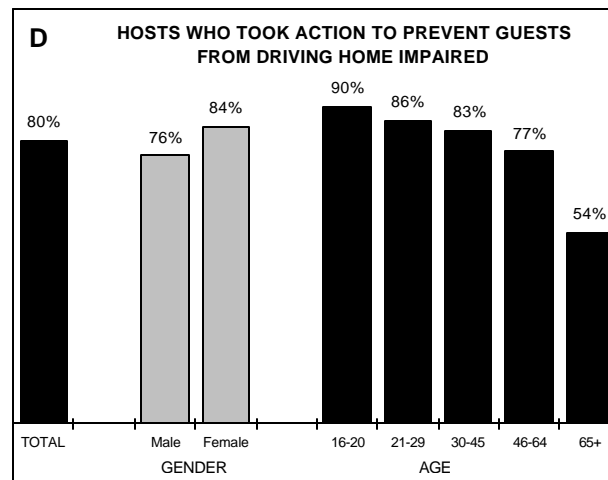
Qx: If you hosted a social event in the past year for adults in which you served alcoholic beverages, how concerned were you about having guests from your party drive home impaired? -Yes hosted party. [Base: all respondents n=5733]



Qx: If you hosted a social event in the past year for adults in which you served alcoholic beverages, how concerned were you about having guests from your party drive home impaired? -Yes hosted party. [Base: hosted a social event in past year and served alcohol n=2521]



Qx: What, if anything, did you do to keep guests from driving home impaired? [Base: hosted a social event and served alcohol n=2527]



Qx: What, if anything, did you do to keep guests from driving home impaired? [Base: hosted a social event and served alcohol n=2527, male n=1146, female n=1375, 16-20 n=161, 21-29 n=446, 30-45 n=921, 46-64 n=707, 65+ n=279]

### **Riding With a Designated Driver**

Three in ten (31%) persons of driving age have ridden with a designated driver in the past year. Riding with a designated driver is slightly more common among males than females, and is most prevalent among those under age 30. [Figure 16-A]

### **Being the Designated Driver**

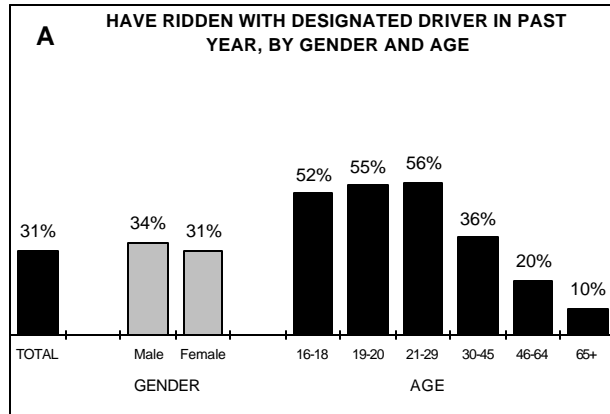
Four of ten drivers have acted as the designated driver for others in the past year. Those age 19-20 were twice as likely to have been a designated driver as were drivers overall. The practice of acting as the designated driver decreases with age. [Figure 16-B]

### **Number of Drinks for Designated Drivers**

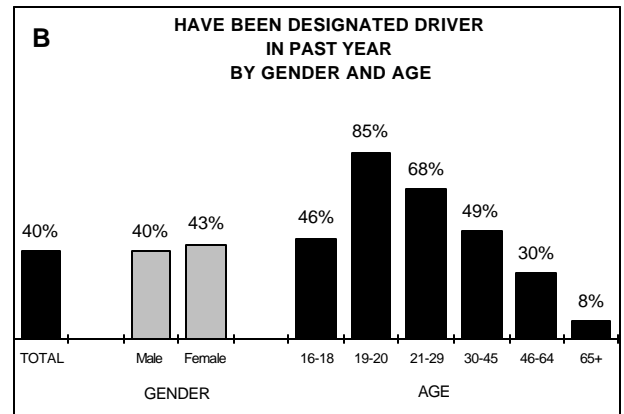
On average, past-year designated drivers average less than one-half of a drink before driving, with 77% reporting less than one drink consumed. [Figure 16-E]

The actual experience with designated drivers closely matches the public perception of the number of allowable drinks for a designated driver. Two-thirds feel that a designated driver should be allowed less than one drink. An additional 17% feel that one drink is acceptable for a designated driver. [Figure 16-D]

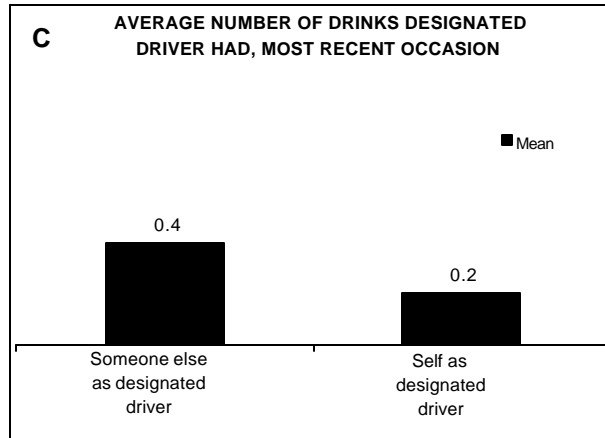
**FIGURE 16: DESIGNATED DRIVERS**



Qx: *In the past year, how many times have you ridden with someone else who agreed to be the designated driver?* [Base: all respondents\*\*]

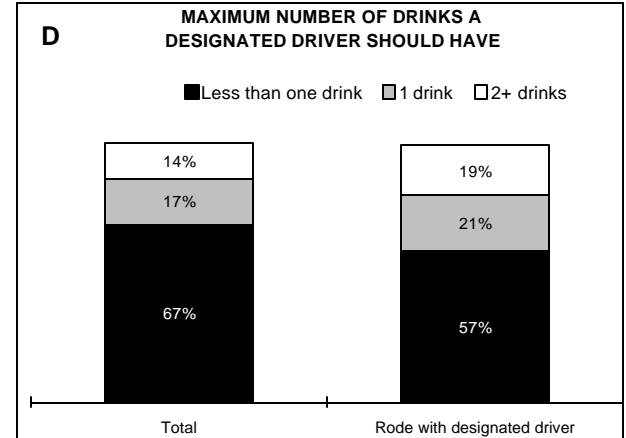


Qx: *Have you been a designated driver for other passengers in the past year?* [Base: all respondents\*\*]



Qx: *On the most recent occasion that you rode somewhere with a designated driver, how many drinks did the designated driver have before driving, if any?* [Base: rode with designated driver past year, n=1770]

Qx: *On the most recent occasion that you were the designated driver, how many drinks did you have before driving, if any?* [Base: have been designated driver past year n=2280]



Qx: *What is the maximum number of drinks a person should have if he or she is the designated driver?* [Base: total n=5733, rode with designated driver n=1770]

\*\*Sample bases for this page:

Male n=2434, female n= 3299

16-18 n=232, 19-20 n=126, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993



## Intervention with Friends Who May Not Be Safe to Drive

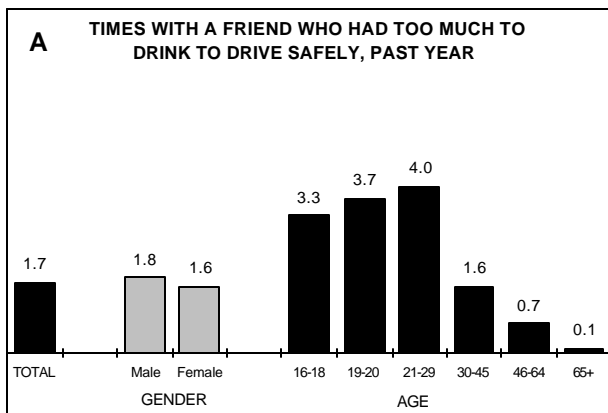
### **Been With Friend Who May Have Drank Too Much To Drive Safely**

One in three persons (32%) age 16 or older have been in a situation of being with a friend who had too much to drink to drive safely. They report an average of 1.7 such experiences. This circumstance has occurred much more often for those under age 30, with the greatest exposure occurring for 21 to 29-year-olds. Those age 19-29 report an average of about four occurrences in the past year of being with a friend who may have consumed too much to drive safely. Few adults over age 45 report at least one such occurrence. [Figures 17-A and 17-B]

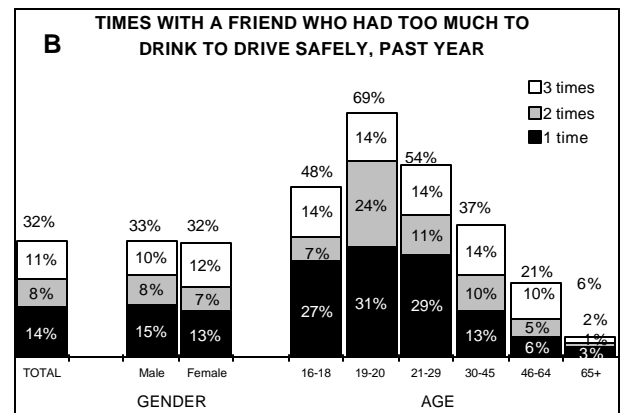
### **Intervention With Friend Who May Have Drank Too Much to Drive Safely**

Eighty-two percent (82%) of those who were with a friend who may have had too much to drink to drive safely tried to stop that friend from driving on the most recent occasion. About 72% of the cases where intervention took place, the potentially impaired friend did not drive. Attempted intervention is highest among 19 to 20 year-olds (at 89%) and drops off considerably after age 64. [Figures 17-C and 17-D]

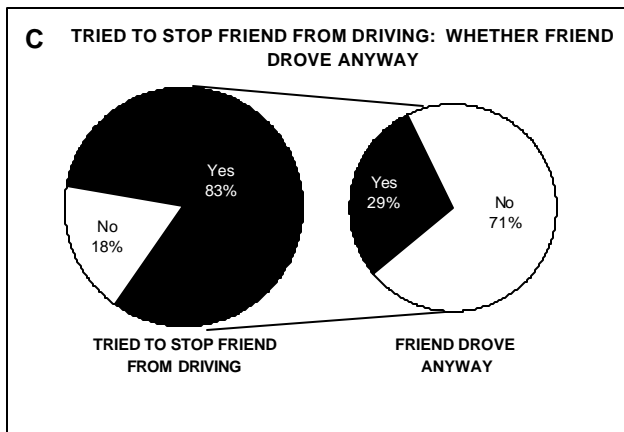
**FIGURE 17: INTERVENTION WITH FRIENDS WHO MAY NOT BE SAFE TO DRIVE**



Qx: *In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely?* [Base: all respondents\*\*]



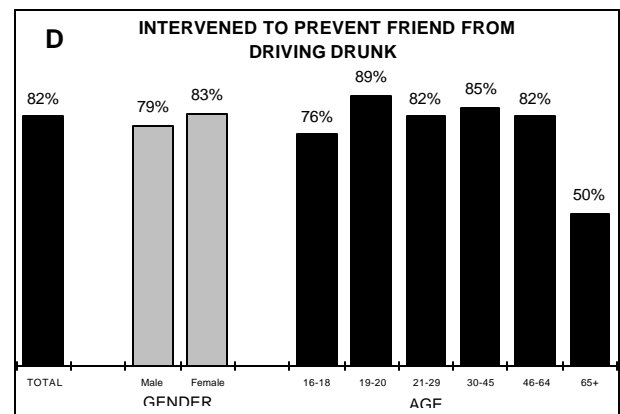
Qx: *In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely?* [Base: all respondents\*\*]



Qx: *Think of the most recent time you were in this situation. Did you do something to stop them from driving?*

[Base: with a friend who had too much to drink to drive safely, one or more times in past year n=1671]

Qx: *Did they drive anyway?* [Base: tried to stop friend from driving n=1357]



Qx: *Think of the most recent time you were in this situation. Did you do something to stop them from driving?*

\*Sample bases for this page:  
Total all respondents n=5733  
Male n=2434, female n=3299

16-20 n=358, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993



## Chapter 4: Enforcement of Drinking and Driving Laws

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For law enforcement to be effective as a preventive measure, those who would potentially exhibit the undesired behavior must believe the threat of detection and enforcement. This section examines the driving age public's experiences with, and perceptions of, enforcement and punishment for drinking and driving violations.

Specifically it covers the following topics:

- Past two year drinking and driving violations and arrests
- Perceptions of the being stopped by police driving after drinking
- Perceptions of punishments for drinking-driving violations
- Attitudes about current drinking-driving violation penalties
- Perceptions and use of sobriety checkpoints
- Awareness and felling of appropriateness of open-container laws

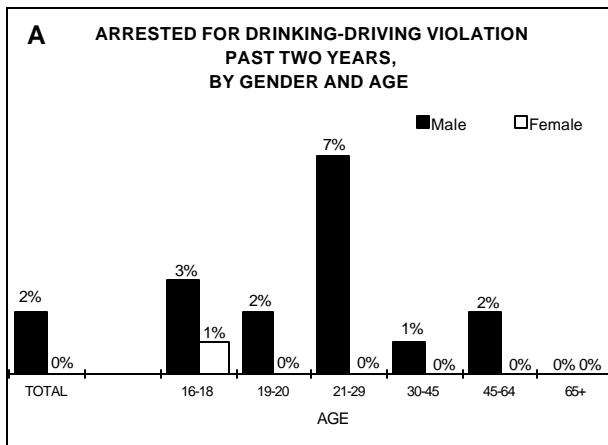
### **Stopped/Arrested for Drinking and Driving Violation**

About 1% of the driving age public report being arrested for a drinking and driving violation in the past two years. Males are more than twice as likely as females to be arrested for drinking and driving violations, although the gender gap is much larger for those age 21 to 29. [Figure 18-A]

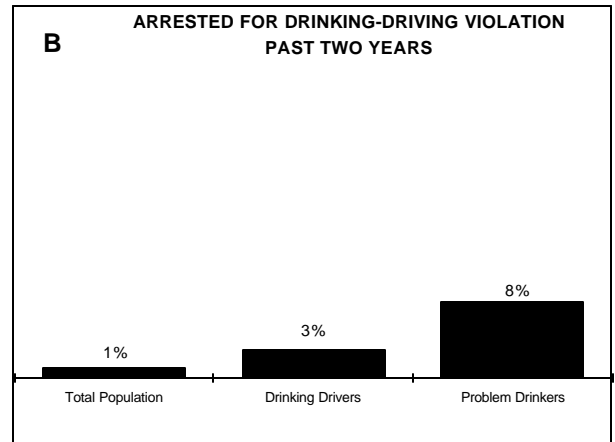
### **Drinker-Drivers and Violations**

About 3% of drinker-drivers have been arrested in the past two years for a drinking and driving violation. This is three times that of the total driving age public. One in twelve (8%) “problem drinkers” has been arrested for a drinking and driving violation. [Figure 18-B]

**FIGURE 18: DRINKING AND DRIVING VIOLATIONS AND ARRESTS**



Qx: Were you arrested for a drinking and driving violation in the past 2 years? (Base: all respondents\*\*)



Qx: Have you been arrested for a drinking and driving violation in the past 2 years? (Base: all respondents\*\*)

Drinking drivers n=1298  
Problem drivers n=529

\*\*Sample base for figures on this page:

	Total	16-18	19-20	21-29	30-45	46-64	65+
Total	5733	232	126	954	1866	1647	993
Male	2434	113	58	388	861	671	337
Female	3299	119	68	466	1005	976	656

### **Likelihood of Being Stopped by Police**

Overall, nearly six in ten believe that they would likely be stopped by the police for driving after having too much to drink. Eleven percent (11%) feel this outcome is almost certain, 15% feel this is very likely and 32% say it is somewhat likely. [Figure 19-A]

### **Percent of Impaired Drivers Who Will Get Stopped by Police and Get in Crash**

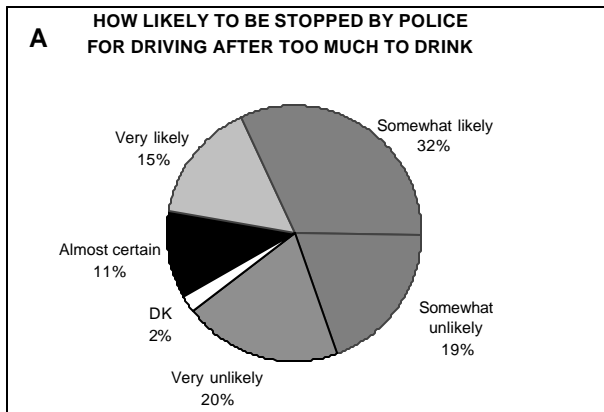
On average, the driving age public believes that the police will stop about 33% of all alcohol-impaired drivers. In contrast, they believe that 43% of them will have a crash. Females feel that a larger proportion of impaired drivers will both get stopped by police and get in a crash. Those under age 21 also perceive a greater likelihood of both outcomes as do older adults. [Figure 19-C]

### **Perceptions of Drinker-Drivers and Other Drivers Who Drink**

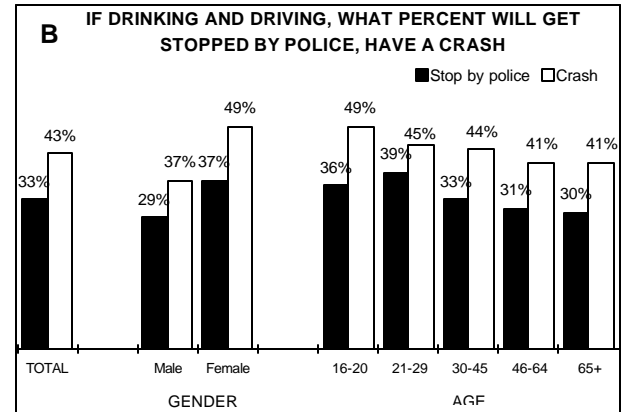
Past-year drinker-drivers perceive a much lower risk of drinking and driving than other drivers who drink alcohol (but not within two hours of driving). One in four (28%) drinker-drivers feel impaired drivers will get stopped while 33% of other drivers who drink believe a police stop will incur. Those who do not drink and drive feel that about 43% of impaired-drivers will be involved in a crash; Those that are drinker drivers believe that 31% will. [Figure 19-C]



**FIGURE 19: PERCEPTIONS ABOUT LIKELY DRINKING-DRIVING OUTCOMES**



Qx: How likely are you to be stopped by a police officer for driving after you have had too much to drink? [Base: all respondents n=5733]

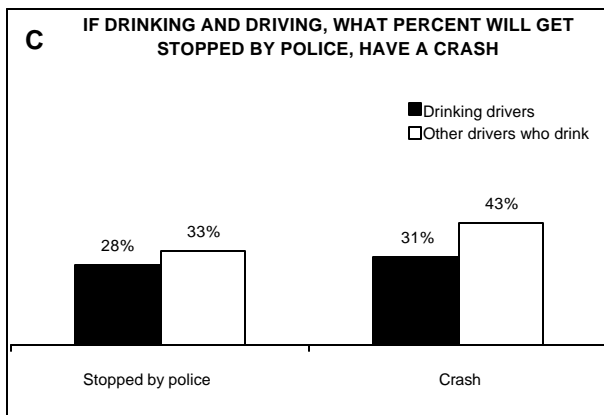


Qx: In your opinion, what percent of drivers who are impaired by alcohol (and then drive) will...

A. Get stopped by the police?

B. Have a crash?

[Base: all respondents\*\*]



Qx: In your opinion, what percent of drivers who are impaired by alcohol (and then drive) will...

A. Get stopped by the police?

B. Have a crash?

[Base: drinking-drivers n=1215, other drivers who drink n=2162]

\*Drinking-drivers: Drove within two hours after drinking in the past year.

\*\*Sample bases for this page:

Total all respondents n=5733

Male n=2434, female n=3299

16-20 n=358, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993

### **Likelihood of Being Arrested if Caught Drinking and Driving**

Four in ten (40%) persons of driving age feel that arrest is almost certain if one is stopped for a drinking and driving violation. [Figure 20-A] An additional 25% feel that such an outcome would be very likely. Drivers under age 20 are much more likely to feel that one would be arrested. [Figure 20-C]

### **Perceived Severity of Punishment for Drinking and Driving**

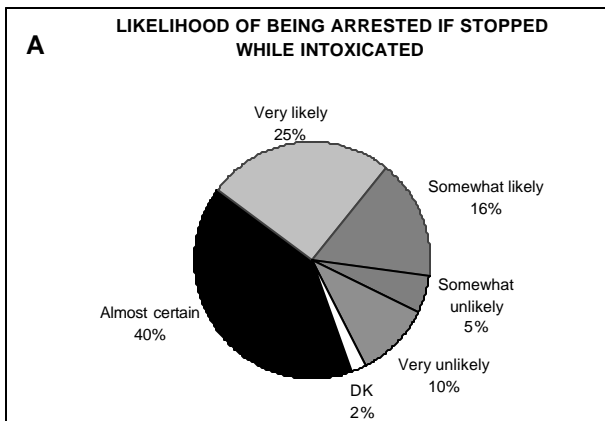
More than six in ten (62%) of those 16 and older believe that a conviction is almost certain (37%) or very likely (28%) once arrested for a drinking and driving violation. [Figure 20-B] Those under age 21 are most likely to perceive a conviction would be forthcoming (76%). [Figure 20-C]

### **Greatest Concern at Being Stopped**

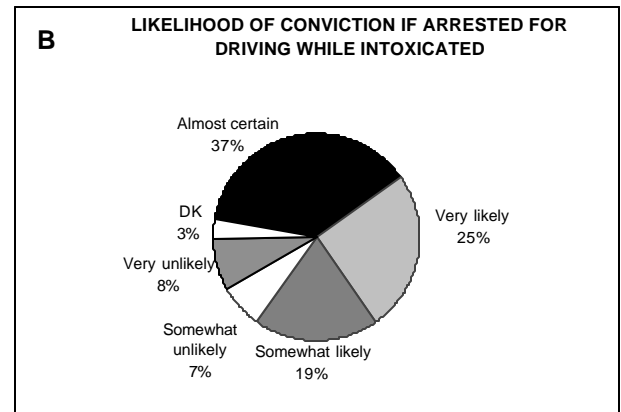
No single threat stands out as causing the greatest concern for drivers for potentially being stopped while intoxicated. One in four (26%) most fear going to jail, while 22% would be concerned about having their license revoked or suspended. One in eight (12%) fear the social ramifications of having family, friends or their community find out. Fines (8%) and higher insurance costs (3%) are not major factors for many people. [Figure 20-D]

Those under age 30 are more likely to be concerned about the potential threat of going to jail, while those in their 30's and 40's are slightly more likely to be concerned with financial penalties or having a suspended license.

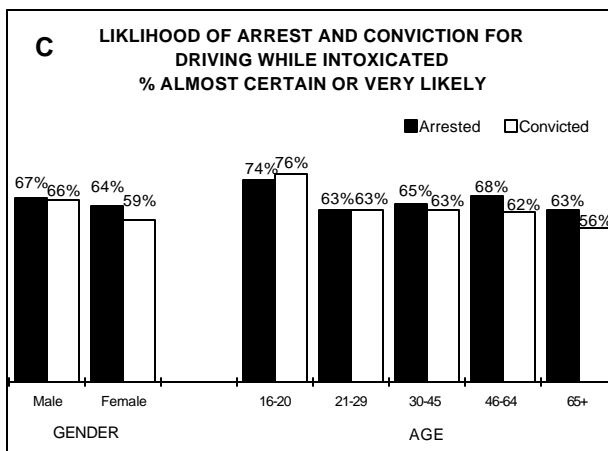
**FIGURE 20: PERCEPTIONS OF LIKELY PUNISHMENT FOR DRINKING-DRIVING VIOLATIONS**



Qx: *If a police officer stops you while intoxicated, how likely would it be that you would be arrested?*  
[Base: all respondents n=5733]

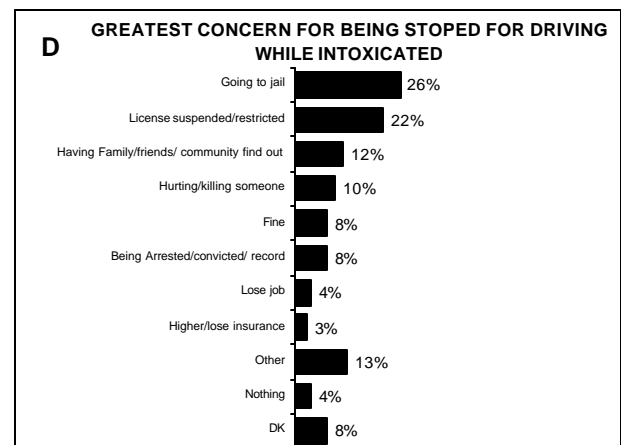


Qx: *If you were arrested for driving while intoxicated, what is the likelihood that you would be convicted of that offense?* [Base: all respondents n=5733]



Qx: *If a police officer stops you while intoxicated, how likely would it be that you would be arrested?*  
[Base: all respondents n=5733]

Qx: *If you were arrested for driving while intoxicated, what is the likelihood that you would be convicted of that offense?* [Base: all respondents n=5733]



Qx: *What would be your greatest concern of being stopped for driving while intoxicated?* [Base: all respondents n=5733]

(Two responses allowed)

### **Perceptions about Severity of Drinking-Driving Laws**

The driving age public supports increased penalties for drinking and driving. More than four in ten (43%) feel penalties for violators should be much more severe, while 30% think they could be somewhat more severe. [Figure 21-A]

### **Drinking-Drivers Vs. Other Drivers Who Drink**

Drinking-drivers are less supportive of increasing the severity of punishments for drinking and driving. 25% agree that penalties should be much more severe as compared to 42% of other drivers that drink who feel this way. [Figure 21-B]

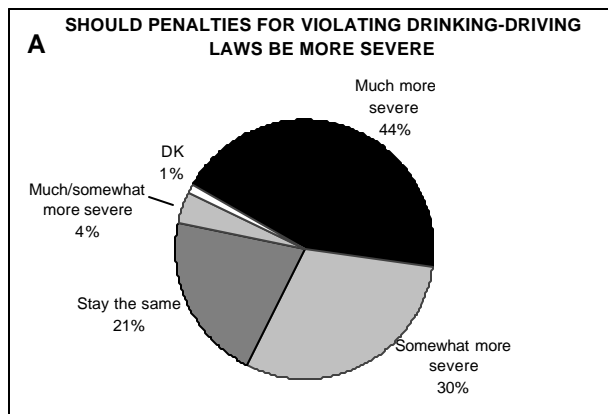
### **Perceived Effectiveness of Current Drinking-Driving Penalties**

While 64% of those 16 and older feel that current laws and penalties to reduce drinking and driving are at least somewhat effective, 28% feel laws and penalties are not too effective, and 7% see them as not at all effective in curbing drinking and driving. Males perceive the laws to be more effective than do females. [Figure 21-C]

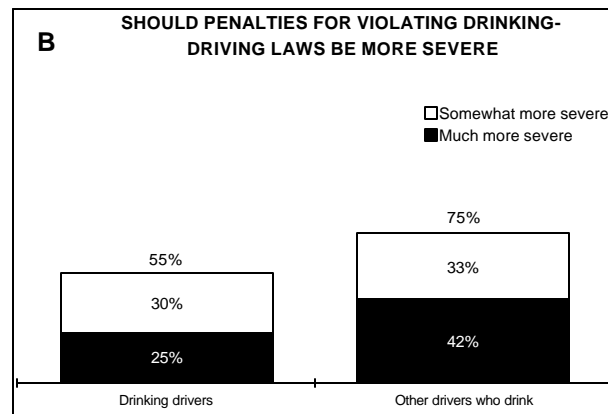
### **Drinking-Drivers Vs. Other Drivers Who Drink**

Drinking-drivers are somewhat more likely to see current drinking and driving laws and penalties as being effective than do other drivers who drink. Seven in ten (69%) of drinking-drivers feel laws and penalties are at least somewhat effective compared to 64% of other drivers who drink who feel this way. [Figure 21-D]

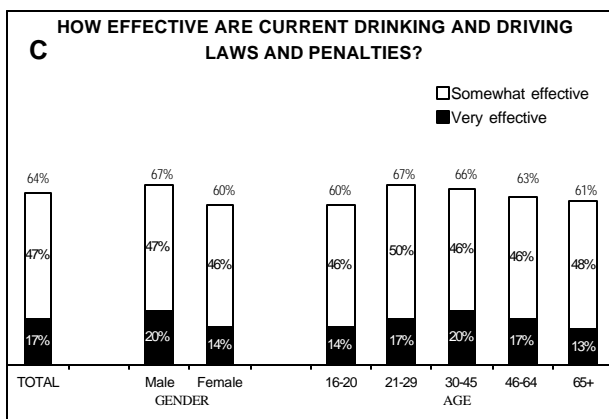
**FIGURE 21: ATTITUDES ABOUT DRINKING-DRIVING PENALTIES**



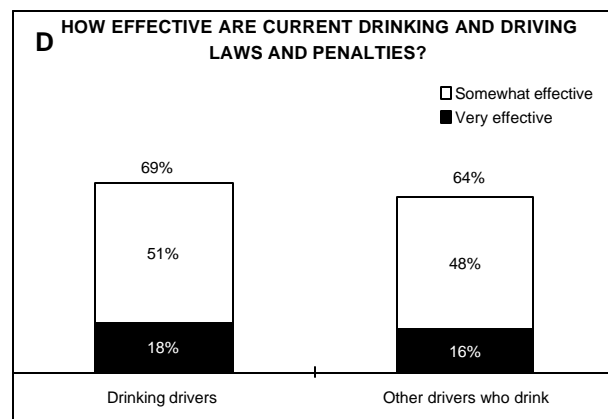
Qx: In your opinion, should the penalties that are given out to drivers who violate the drinking and driving laws be...? [Base: all respondents n=5733]



Qx: In your opinion, should the penalties that are given out to drivers who violate the drinking and driving laws be...? [Base: Drinking drivers n=1298, Other drivers who drink n=2478]



Qx: In your opinion, how effective are current laws and penalties at reducing drinking and driving? [Base: all respondents\*\*]



Qx: In your opinion, how effective are current laws and penalties at reducing drinking and driving? [Base: Drinking drivers n=1298, Other drivers who drink n=2478]

\*\*Sample bases for this page:

Total all respondents n=5733

Male n=2434, female n=32990

16-20 n=358, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993

## Perceptions and Use of Sobriety Checkpoints

---

Sobriety checkpoints are sometimes used by police to check drivers for alcohol impairment. Checkpoints are used as both a deterrent to potential drinker-drivers and as a means of intervention to get impaired drivers off the road before a crash occurs.

### **Seen a Sobriety Checkpoint, Past Year**

One-third (34%) persons age 16 or older have seen a sobriety checkpoint in the past year. Males are much more likely to have seen these checkpoints than females (28%). The likelihood of seeing a sobriety checkpoint decreases with age. [Figure 22-A]

### **Frequency of Sobriety Checkpoints**

About 19% of the driving age public have been through at least one sobriety checkpoint in the past year, with half of these going through at least two checkpoints. [Figure 22-B]

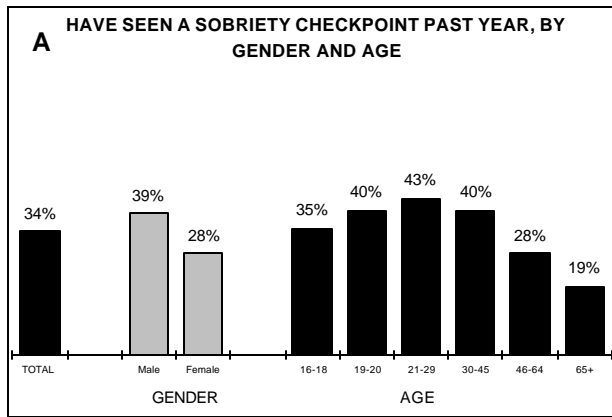
### **Recommended Frequency of Sobriety Checkpoint Use**

More frequent use of sobriety checkpoints is endorsed by nearly two-thirds (64%) of the driving age public. Only 7% feel that less frequent use is warranted. [Figure 22-C]

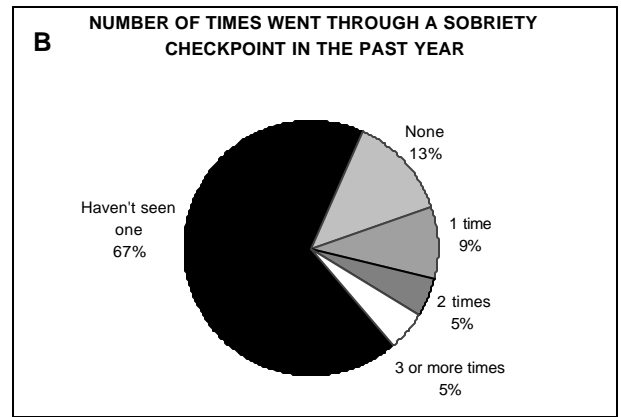
### **Drinking-drivers vs. Other Drivers who Drink**

Consistent with perceptions about other forms of enforcement and penalties, drinking-drivers are much less likely than other drivers who drink to feel that sobriety checkpoints should be used more frequently. Just 44% of drinking drivers feel they should be used more frequently compared to 62% of other drivers who drink. [Figure 22-D]

**FIGURE 22: PERCEPTIONS AND USE OF SOBRIETY CHECKPOINTS**

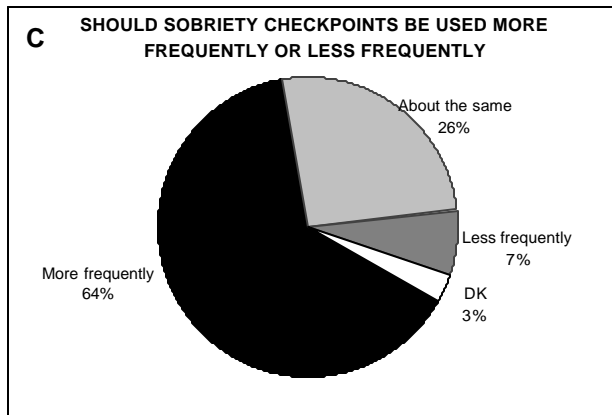


Qx: *In the past 12 months, have you seen a sobriety checkpoint - where drivers are stopped briefly by police to check for alcohol-impaired driving?* [Base: all respondents\*\*]

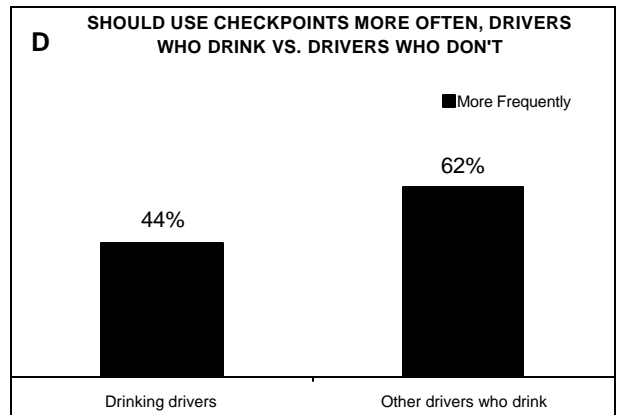


Qx: *In the past 12 months, have you seen a sobriety checkpoint - where drivers are stopped briefly by police to check for alcohol-impaired driving? How many times have you been through a checkpoint in the last 12 months?*

[Base: all respondents n=5733]



Qx: *Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently?* [Base: all respondents n=5733]



Qx: *Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently?* [Base: drove within 2 hours of drinking n=1298, other drivers who drink n=2078]



### **Knowledge of Open Container Law**

The vast majority (86%) of persons of driving age believe that their state has an open container law, whereby it is illegal to have an open container of alcohol inside the car while someone is driving. Males (89%) are more likely than females (83%) to believe their state has such a law. [Figure 23-A]

### **Belief that State Should Have Open Container Law**

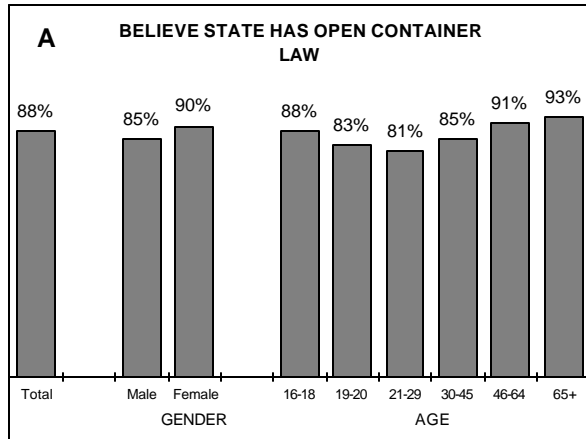
Nearly nine of ten (88%) persons of driving age believe that their state should have an open container law. While males were more likely to believe that their state had such a law, females are more likely to believe that such a law should be in place (90% of females as compared to 85% of males). Persons over age 45 are also more likely to believe their state should have an open container law. [Figure 23-B]

### **Knowledge of Open Container Law, by State**

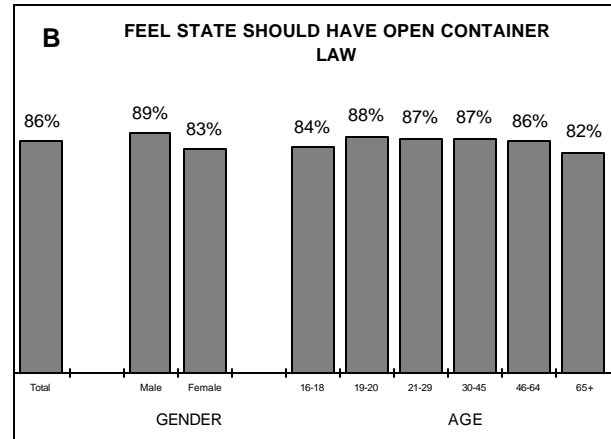
As can be seen in Figure 1-C, knowledge of their state's open container law varies significantly by state. At the time of the survey, 13 states were in full compliance of the open-container law, while 4 states had no such law in effect. The remaining states and DC were in partial compliance of the law at the time of the survey administration.

Persons in California, Michigan and Oregon are most likely to know that their state has an open container law (95% in each of these states-California and Michigan was in full compliance of the law, while Oregon was a partial compliance state). Of the remaining 11 states which were in full compliance at the time of the study, four have fewer than one in 12 residents who are knowledgeable about the law (in Nebraska just 79% are aware, Ohio 82%, Illinois 85% and Nevada 86%). In contrast, while four states have no statewide law, a large majority of residents in Connecticut (82%), Mississippi (76%) and Louisiana (73%) believe their state does have such a law, while 56% of residents of Wyoming think that their state has such a law. [Figure 23-C]

**FIGURE 23: OPEN CONTAINER LAWS**



Qx: *To the best of your knowledge, does your state have any law that makes it illegal to have an open container of alcohol inside the car while someone is driving?* [Base: all respondents\*\*]



Qx: Do you think your state **SHOULD** have this type of open container law? [Base: all respondents\*\*]

**C BELIEVE STATE HAS OPEN CONTAINER LAW BY STATE**

California*	95%	New York	89%	Nebraska*	79%
Michigan*	95%	Idaho	89%	Georgia	79%
Oregon	95%	Rhode Island	89%	Texas	79%
Kansas*	93%	Iowa	89%	New Mexico	79%
Utah*	93%	Hawaii	87%	West Virginia	76%
New Jersey	93%	South Carolina	87%	Mississippi++	76%
Oklahoma*	93%	Nevada*	86%	Colorado	76%
Washington*	93%	Indiana	86%	Kentucky	74%
North Dakota*	92%	Pennsylvania	86%	Montana	74%
New Hampshire*	92%	Maine	85%	Arizona	74%
Missouri	92%	Illinois*	85%	Louisiana++	73%
Massachusetts	92%	North Carolina	84%	Delaware	73%
Minnesota	92%	Florida	83%	Washington D.C.	73%
Wisconsin*	92%	Alaska	83%	Alabama	72%
Vermont	91%	Virginia	83%	Arkansas	71%
South Dakota	90%	Ohio*	82%	Wyoming++	56%
		Maryland	82%		
		Tennessee	82%		
		Connecticut++	82%		

\* States in full compliance of open-container law  
 ++ States with no open-container law  
 Other states are in partial compliance or their law changed during 1999

\*\* Sample bases for this page:

Male n=2434, female n=3299

16-18 n=232, 19-20 n=126, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993



## Chapter 5: Knowledge and Awareness of Blood Alcohol Concentration (BAC) Levels and Legal Limits

---

The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration" or BAC level. At the time the survey was administered, most states set the BAC limit at .10, while the limit in 15 states and DC was .08\*. Public sentiment generally supports the .08 BAC initiative.

This section examines the driving age public's awareness and perceptions on the following BAC level topics:

- Awareness and knowledge of BAC levels and the legal limit for their states
- Knowledge of amount of alcohol to reach the BAC legal limit
- Acceptance of .08 BAC legal limits

\* As of November 2000, 19 states plus DC and Puerto Rico have .08 per se laws.

## Awareness and Knowledge about BAC Levels and Legal Limits

---

### **Have Heard of BAC Levels**

Four out of five (80%) persons of driving age have heard of blood alcohol concentration (BAC) levels. Males (84%) are more likely to have heard of BAC levels than have females (78%). Persons under age 30 are more likely than older persons to have heard of these levels with 70% of those age 65 or older aware. [Figure 24-A]

### **Awareness Among Drinking-Drivers**

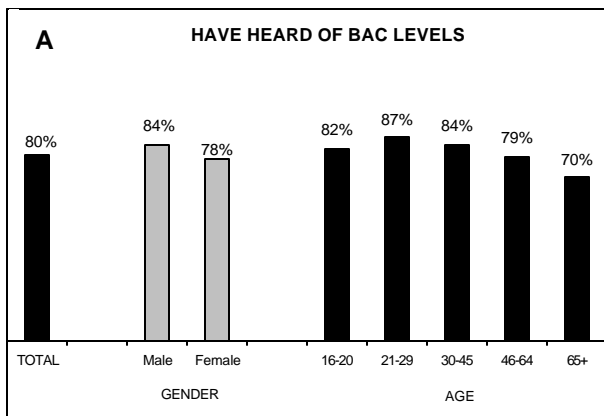
Drinking-drivers are significantly more likely to be aware of BAC levels than other persons, with 90% awareness. [Figure 24-B]

### **Knowledge of State's BAC Legal Limit**

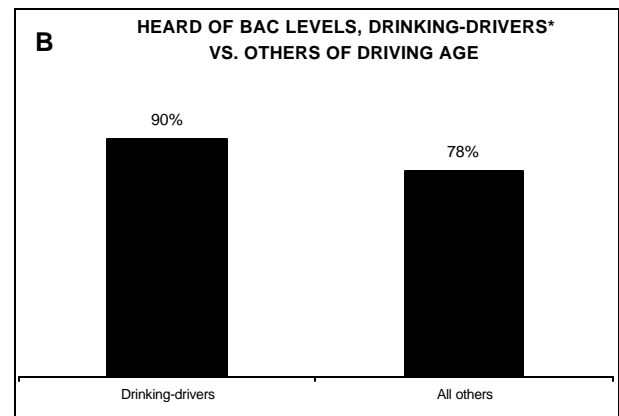
Slightly more than half (54%) of the driving age public think that they know the BAC legal limit for their state. However, only half (50%) of those who thought they knew the level were able to give the correct BAC legal limit for their state. Therefore, to just 27% of persons of driving age who know their state's BAC limit. [Figure 24-C]

Persons living in the 34 states with a .10 BAC legal limit at the time of the study were less likely to correctly know the legal limit in their state than those persons living in states with a .08 limit. Less than one-quarter (22%) of those in .10 BAC limit states correctly named the legal limit in their state. In contrast, 33% of persons in .08 states were aware of their state's limit. [Figure 24-D]

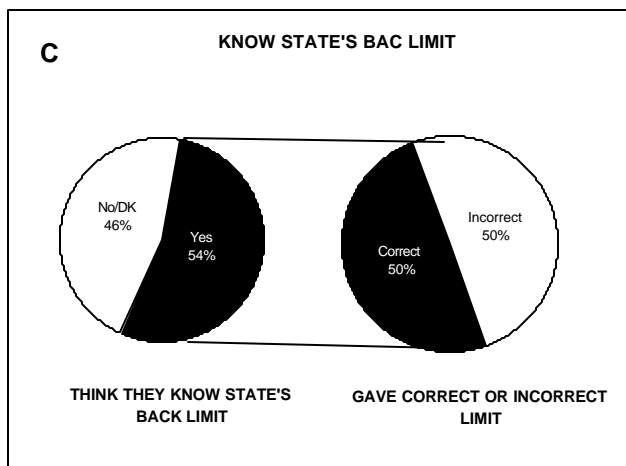
**FIGURE 24: AWARENESS AND KNOWLEDGE ABOUT BAC LEVELS AND LEGAL LIMITS**



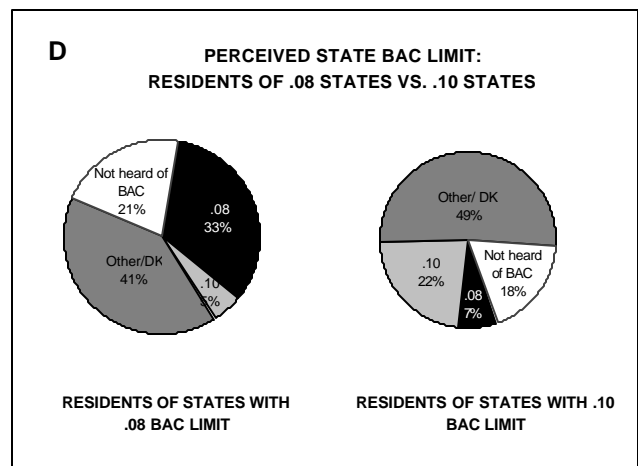
Qx: The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration," which is often called the BAC level. Have you heard of blood alcohol concentration BAC levels? [Base: all respondents n=5733]



Qx: The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration," which is often called the BAC level. Have you heard of blood alcohol concentration BAC levels? [Base: drinking-drivers\* n=1298, all others n=4435]



Qx: To the best of your knowledge, what is the specific BAC limit for your state?  
[Base: respondents who thought they knew state's BAC limit; answers were compared with actual BAC limits for each respondent's state of residence n=3258]



Qx: To the best of your knowledge, what is the specific BAC limit for your state?  
[Base: respondents in .08 and .10 BAC states; answers were compared with actual BAC limits for each respondent's state of residence; .08 states n=2068, .10 states n=3665]

## BAC Limits for Drivers Under Age 21

---

All 50 states and the District of Columbia have laws that prohibit the purchase and public possession of alcoholic beverages by persons under the age of 21. At the time this survey was administered, 45 states and the District of Columbia had set “zero-tolerance” laws for persons under age 21\*. For this question “zero tolerance” is any measurable amount of alcohol or a maximum of .02 BAC.

### **Knowledge of State’s Legal Drinking Age**

While all 50 states and the District of Columbia have age 21 drinking laws in place, 15% of the driving age population believes their state’s legal age is something other than 21. One in ten mistakenly believe the legal age in their state is 18.

Persons under age 30 are most knowledgeable about the state’s legal drinking age (95%). [Figure 25-B]

People in Washington D.C. (27%), Maryland (25%), Tennessee (25%), South Carolina (22%), New York (21%), Kentucky (23%), Georgia (22%) and Arkansas (24%) are most likely to say their state’s legal drinking age is something other than 21.

### **Knowledge of BAC Limit for Minors**

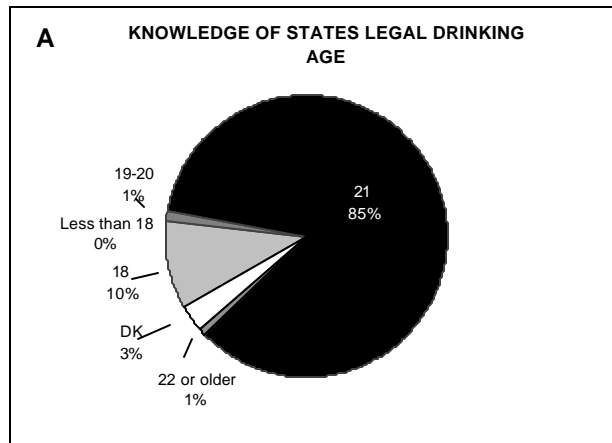
More than one-quarter (28%) of the driving age public do not know if their state has a different BAC level for drivers under the age of 21. Only one in seven (15%) thinks the legal limit for those under 21 is different for those over 21. Again, the overwhelming majority of states had zero tolerance laws for those under age 21 at the time of survey administration. [Figure 25-C]

### **Believe BAC Limit for Drivers Under 21 is Same as 21 and Older**

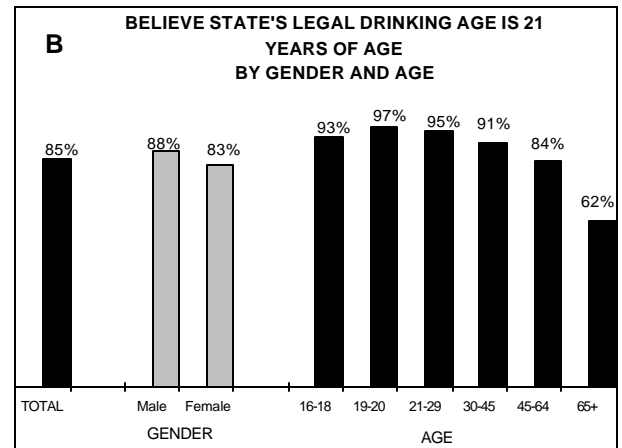
Almost six in ten (57%) feel that the BAC limit for drivers under age is the same as that for drivers over 21. Males are more likely to think that the limit is the same. Persons age 19-20 are most likely to believe that the BAC limit for underage drinkers is the same as for those age 21 and older. Education is clearly necessary to convey information about zero tolerance laws for those under 21 to the general population and especially to those under age. [Figure 25-D]

\*As of November 2000, all states have zero tolerance laws for drivers under 21.

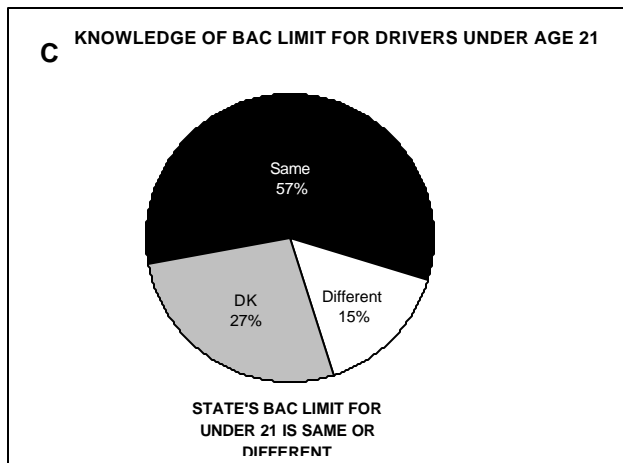
**FIGURE 25: BAC LIMITS FOR DRIVERS UNDER AGE 21**



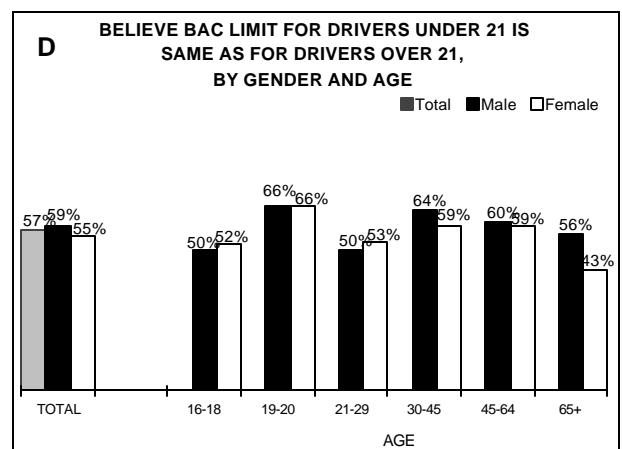
Qx: To the best of your knowledge, what is the minimum legal drinking age in your state? [Base: all respondents n=5733]



Qx: To the best of your knowledge, what is the minimum legal drinking age in your state? [Base: all respondents n=5733]



Qx: In some states the legal BAC limit for drivers under 21 is different than for drivers over 21. In your state, is the legal limit the same for drivers under 21? [Base: all respondents n=5733]



Qx: In some states the legal BAC limit for drivers under 21 is different than for drivers over 21. In your state, is the legal limit the same for drivers under 21? [Base: all respondents n=5733]



**\*\*Sample bases for this page:**

Total all respondents n=5733

Male n=2434, female n=3299

16-20 n=358, 21-29 n=854, 30-45 n=1866, 46-64 n=1647, 65+ n=993

### **Number of Beers in Two Hours to Reach Legal Limit**

Those who thought they knew their state's BAC limit were asked how many beers in a two-hour period it would take to just reach their state's legal limit (either .08 or .10). The driving age public generally underestimates the number of drinks it takes to reach the BAC level in their state.

Nearly two-thirds (64%) believe that it would take three or fewer beers within two hours for a person about their size to reach the state's limit regardless of whether it is a .08 or .10 limit state. An additional 15% feel that the limit would be reached at four beers. Seven of ten women and 57% of males feel they would reach the limit with three or fewer beers.

The general public greatly under-estimates the number of drinks to reach the legal BAC limit. Studies have shown that it would take an average 170-pound male more than four drinks within a two-hour period to reach a level of .08, while a 137-pound woman would reach this level with more than three drinks in two hours. [Figure 26-A]

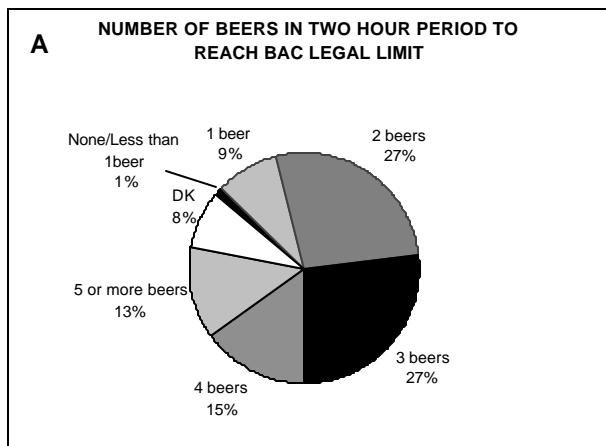
Four of ten (41%) persons living in .08 BAC limit states believe they would reach their state's limit with two or fewer drinks in two hours, while 34% of those in .10 BAC states feel this number of drinks would get them to the legal limit. [Figure 26-B]

### **Number of Drivers Who Would be Dangerous With BAC at Legal Limit**

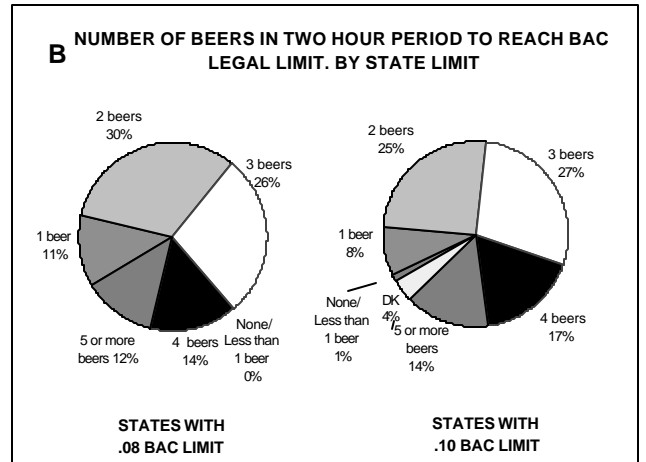
Nearly two-thirds of those who have heard of BAC levels think that all or most drivers would be dangerous with a BAC at the legal limit. [Figure 26-C] This includes those who (incorrectly) believe that it would take three or fewer drinks to reach the limit.

Persons age 16 to 18 are much less likely than older persons to feel that all drivers would be dangerous at their state's legal limit. Only 13% of these minors believe a person would be dangerous at the BAC limit. Males are less likely than females to feel people would be dangerous at the limit. [Figure 26-D]

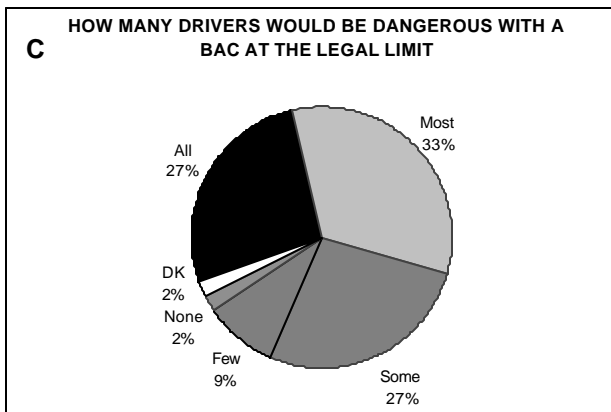
**FIGURE 26: KNOWLEDGE OF AMOUNT OF ALCOHOL TO REACH BAC LIMIT**



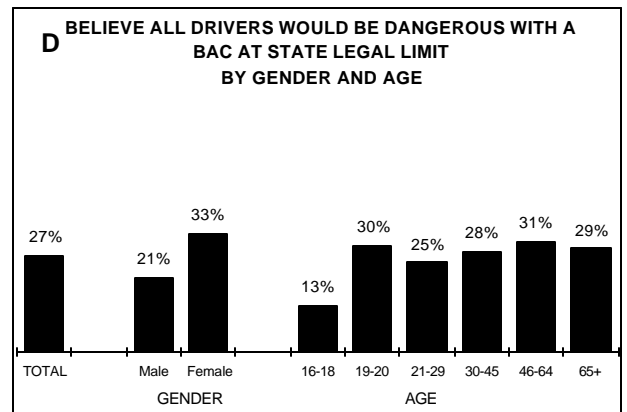
Qx: How many beers would a person about your size have to drink in a two hour period to just reach the legal limit? [Base: believe they know the state's BAC limit n=4636, .08 states n=1686, .10 states n=2950]



Qx: How many beers would a person about your size have to drink in a two hour period to just reach the legal limit? [Base: believe they know the state's BAC limit n=4636, .08 states n=1686, .10 states n=2950]



Qx: In your opinion, how many drivers would actually be dangerous drivers with a BAC at the legal limit? [Base: all respondents n=5733]



Qx: In your opinion, how many drivers would actually be dangerous drivers with a BAC at the legal limit? [Base: all respondents n=5733]

## Acceptance of .08 BAC Limit

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New questions were added in the 1997 administration to get a better understanding of the driving age public's perceptions and acceptance of .08 BAC limits. Persons living in .08 BAC limit states who had heard of BAC levels were asked if the BAC limit in their state should stay at its current level, or be raised (made looser) to .10. Those living in .10 BAC states were asked if their state's level should be lowered (made stricter) to .08 or stay at the current level.

### Views Toward the Raising/Lowering of State's BAC Limit

A majority of those aware of BAC levels support a BAC limit of .08 or stronger. About two-thirds (68%) of those age 16 and older who have heard of BAC levels feel that their state's BAC level should remain at (for those in .08 states or be lowered to for those .10 states) a .08 BAC level. About 86% of these residents in current .08 states feel that the limit should remain at .08 (72%), or be made even stricter (14%) while about half of those in .10 states feel that the limit should be lowered to .08. [Figure 27-A]

### By Age

There are no substantial differences in views toward raising or lowering the BAC limit by age group. About two-thirds of those in all age groups support a BAC limit of .08. [Figure 27-B]

### By Gender

Females are much more likely to say the BAC limit should stay at or be made stricter to .08 than are males with 69% of females, versus 59% of males supporting a .08 limit. [Figure 27-C]

### Drinker-Drivers

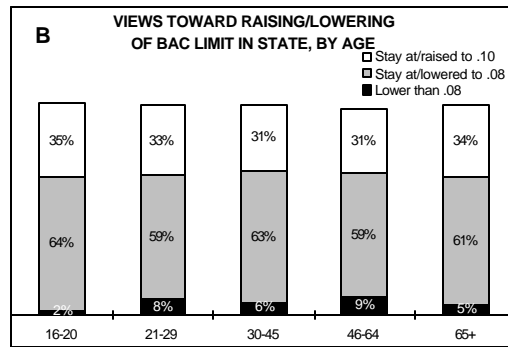
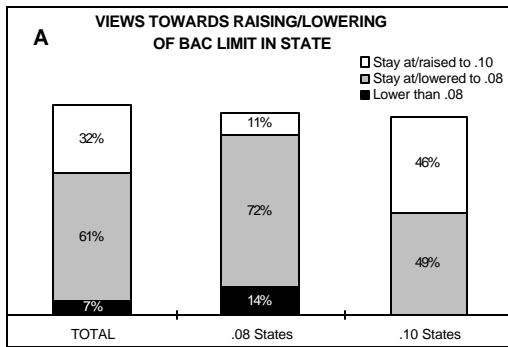
Support for .08 BAC limits is much higher among persons of driving age who do not drive within two hours of consuming alcohol. While just over one-third (36%) of drinker-drivers feel their state limit should be .08, 70% of non-drinker drivers support .08 BAC. [Figure 27-D]

### State Support

There is a great deal of variance in support of a .08 or stricter BAC limit by state with generally high levels of support among those in states with current .08 BAC limits and lower support among all .10 states. Virtually all persons of driving age who are aware of BAC limits in New Mexico (95%), Oregon (95%), Utah (94%) and California (93%) support .08 or stricter current .08 states. At the other end of the support continuum, just 35% in South Dakota and just 42% in North Dakota support .08 BAC for their state current .10 states.

Support for .08 reaches at least 69% of those aware of BAC limits in all states which had .08 BAC legal limits at the time of the survey administration. Many of the states with .08 BAC support of 50% or lower, are located in Midwest or East. [Figure 27-E]

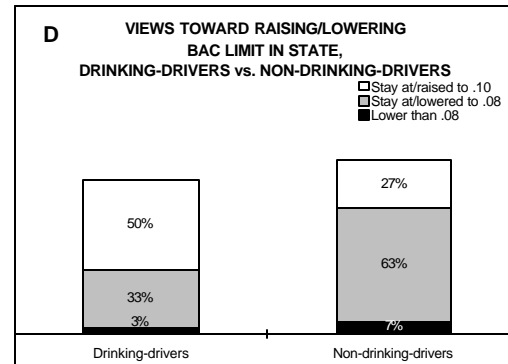
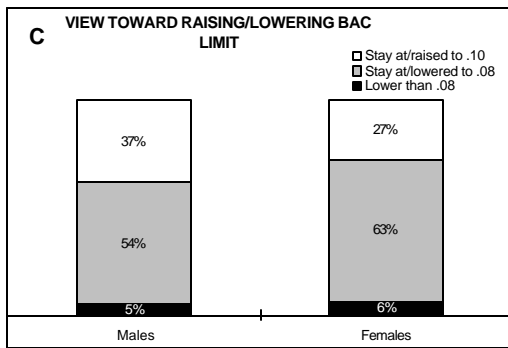
**FIGURE 27: ACCEPTANCE OF .08 BAC LIMIT**



Qx: The BAC limit in your state is currently .08. In your opinion, should the BAC level in your state be raised, that is made looser to a level of .10, or should it stay at its current level of .08?

Qx: The BAC limit in your state is currently .10. In your opinion, should the BAC level in your state be lowered, that is, made stricter to a level of .08, or should it stay at the current level of .10?

[Base: heard of BAC levels, total n=5473, .08 states n=1808, .10 states n=3665]



[Base: specified in the chart and heard of BAC levels male n=2334, female n=3139]

[Base: specified in the chart and heard of BAC levels Drinking drivers n=1234, non drinking drivers n=4229]

Qx: The BAC limit in your state is currently .08. In your opinion, should the BAC level in your state be raised, that is

Qx: The BAC limit in your state is currently .10. In your opinion, should the BAC level in your state be lowered, that

**E VIEW TOWARD RAISING/LOWERING BAC LIMIT IN STATE, BY GENDER**

STATES WITH 71% OR HIGHER SUPPORT FOR .08 OR STRICTER SUPPORT				STATES WITH 51 TO 70% SUPPORT FOR .08 OR STRICTER SUPPORT				STATES WITH 50% OR LESS SUPPORT FOR .08 OR STRICTER SUPPORT			
NM	95*	KS	87*	NC	69*	AZ	57	NY	50	NJ	45
OR	95*	VA	85*	AR	66	WY	56	NV	49	MT	44
UT	94*	FL	84*	SC	64	OK	55	OH	48	LA	44
CA	93*	DC	82*	WV	64	AK	55	IN	48	ND	42
TX	92*	IL	80*	TN	62	CT	55	IA	48	SD	35
VT	92*	AL	79*	RI	61	CO	54	MI	48		
HI	91*	ID	74*	GA	59	MD	53	DE	47		
ME	89*			NE	59	MN	53	PA	47		
WA	88*			MO	58	KY	53	WI	46		
NH	88*			MS	58			MA	45		

\* State with .08 limit



## Chapter 6: Motor Vehicle Crash and Injury Experience

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The overriding goal in attempts to reduce alcohol-impaired driving is to reduce the resulting alcohol-related motor vehicle crashes, especially those that result in fatalities. This section examines experiences in motor vehicle crashes as both a passenger and a driver, specifically it covers the following topics:

- Involvement in motor vehicle crash with the past two years as a driver
- Consumption of alcohol by respondent as driver prior to the crash
- Resulting injuries from crash as the driver
- Involvement in motor vehicle crash in past two years as a passenger
- Consumption of alcohol by driver of prior to the crash
- Resulting injuries from crash as a passenger

### **Involved in Vehicle Crash as Driver, Past Year**

Two in ten (17%) drivers were involved in a motor vehicle crash in the past two years while driving a motor vehicle. Motor vehicle crashes were significantly more likely to be reported by drivers age 19-20, of whom 31% report a crash. The likelihood of a motor vehicle crash declines steadily with age. [Figure 28-A]

### **Consumption of Alcohol Prior to Crash, Crashes as a Driver**

The driver had consumed alcohol within two hours prior to driving in about 2% of the reported past-year motor vehicle crashes. Males and drivers under age 21 were more likely to have consumed alcohol prior to their crash. [Figure 28-B]

### **Injury Experienced in Motor Vehicle Crash as the Driver, Past Year**

Somewhat more than 5% of all drivers have been involved in a motor vehicle crash as the driver, which resulted in an injury to the driver or a passenger. Those under age 30 are more likely to have been involved in an injury crash. [Figure 28-C]

### **Passenger in Vehicle Crash, Past Year**

About 5% of the driving age public has been involved in a motor vehicle crash as a passenger in the past year. Youths under age 21 are three times as likely as other drivers to have been a passenger in a vehicle crash in the past year. [Figure 28-D]

### **Injury Experience in Motor Vehicle Crash as a Passenger, Past Year**

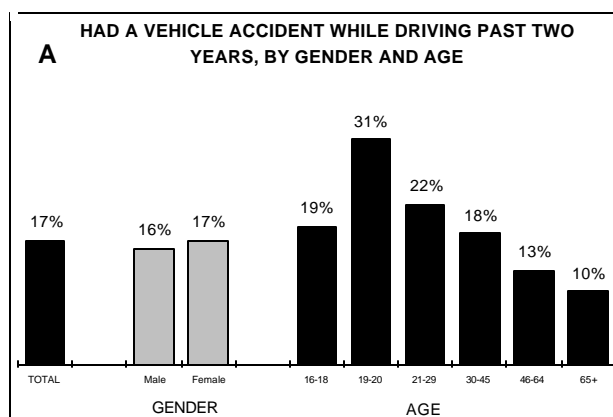
An injury was sustained by one or more persons in about 27% of the motor vehicle crashes in which the driving age public was involved in the past year. [Figure 28-E]

### **Consumption of Alcohol Prior to Crash, Crashes as a Passenger**

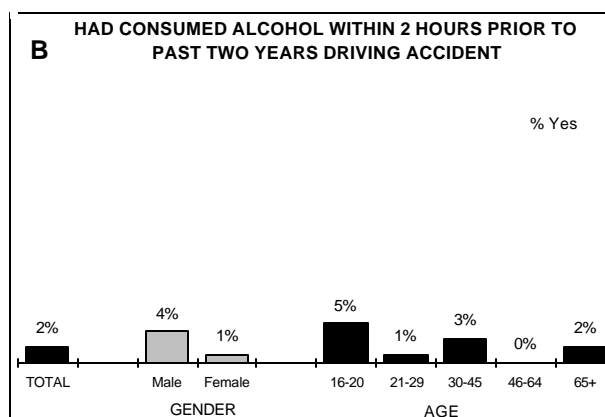
The driver had consumed alcohol within two hours prior to driving in about 10% of the motor vehicle crashes where a person of driving age was involved as a passenger. [Figure 28-F]



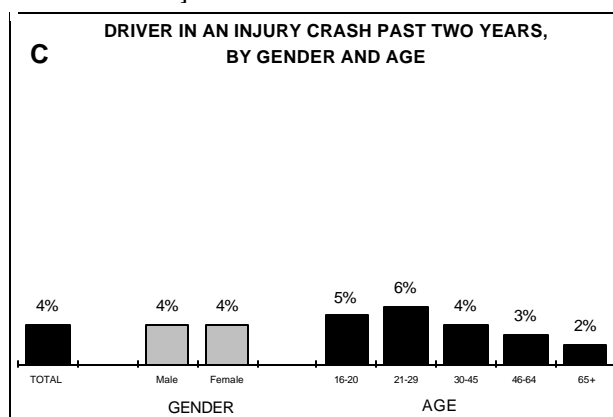
**FIGURE 28: INVOLVEMENT IN MOTOR VEHICLE CRASH, PAST TWO YEARS**



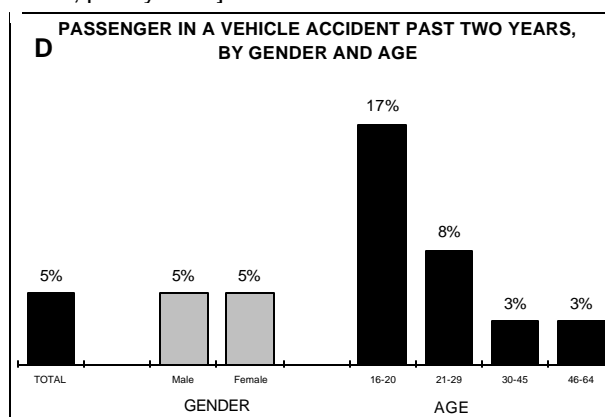
Qx: *In the past two years, have you been involved in a crash while driving a motor vehicle?* [Base: drivers n=5375]



Qx: *Had you consumed alcohol within two hours prior to the crash?* [Base: involved in crash as driver, past year\*\*]



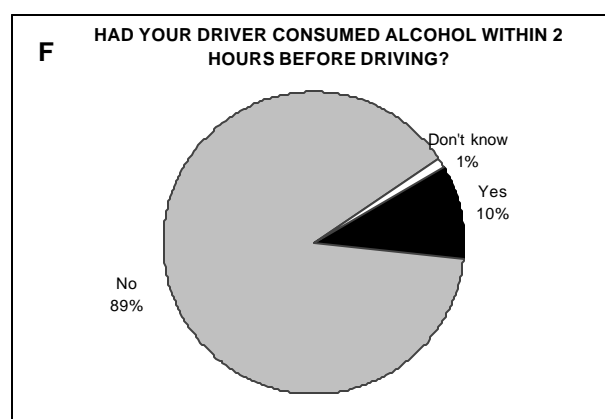
Qx: *In the past two years, have you had an accident while driving a motor vehicle? Was anyone injured (in any of those accidents)?* [Base: drivers\*\*]



Qx: *In the past two years, have you been in an accident while you were a passenger?* [Base: all respondents]



Qx: *Was anyone injured (in any of those crashes)?* [Base: involved in a crash as a passenger, past two years n=224]



Qx: *Had your driver consumed alcohol within two hours before getting behind the wheel?* [Base: involved in a crash as a passenger, past two years n=224]

\*\*Sample base for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Total	5733	2434	3299	358	854	1866	1647	993
Drivers	5375	2353	3022	329	810	1815	1580	829
Involved in crash while driving	819	358	461	86	177	294	187	75

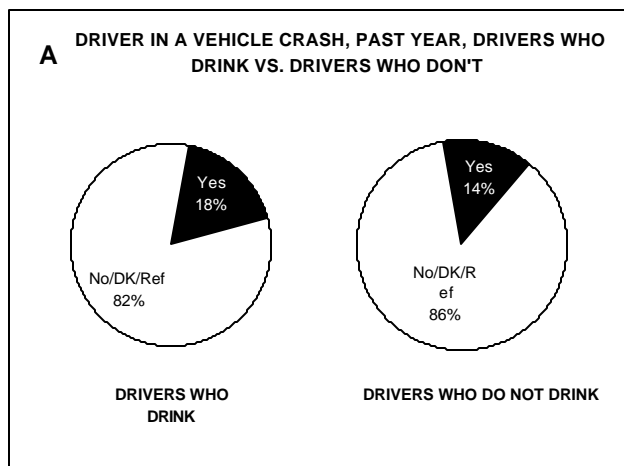
## Crash Experience of Drivers Who Drink, Drivers Who Do Not Drink, and Drinking-Drivers

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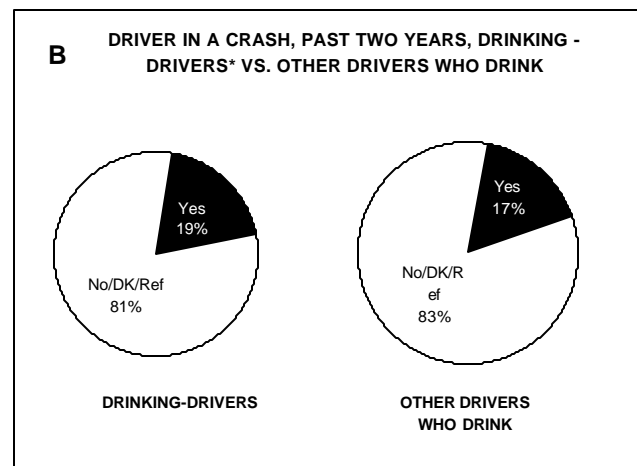
Drivers who drink are slightly more likely to have been involved in a motor vehicle crash in the past year than have drivers who do not drink. About 18% of drivers who drink have been involved in a past-year crash as compared to 14% for drivers who do not drink. [Figure 29-A]

There is no significant difference in the percentage of drinking-drivers who report involvement in motor vehicle crashes in the past year and that of other drivers who drink (but not within two hours of driving). [Figure 29-B]

**FIGURE 29: CRASH EXPERIENCE OF DRIVERS WHO DRINK, DRIVERS WHO DO NOT DRINK, AND DRINKING-DRIVERS\***



Qx: *In the past two years, have you been involved in a crash while driving a motor vehicle in which there was damage to your vehicle or another vehicle?* [Base: drivers who drink n=3376, drivers who do not drink n=1999]



[Base: drinking-drivers n=1298, other drivers who drink n=2078]

\* Drinking-drivers: Drove within two hours after drinking in past year



## Chapter 7: Effectiveness of Strategies to Reduce or Prevent Drunk Driving

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While many actions could be taken to reduce or prevent drunk driving, strategies and programs that do not have the support of the general public will not be accepted and embraced and ultimately may fail.

This section assesses the driving age public's perception of the effectiveness of the following strategies:

- Increasing law enforcement
- Reducing places that sell alcohol
- Increasing cost of alcohol
- Making sellers more legally responsible
- Providing alternate transportation options
- Limiting certain types of alcohol advertising
- Making alcohol treatment programs more available

## Perceived Effectiveness of Strategies to Reduce Drunk Driving

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The driving age public was asked to rate the effectiveness of seven specific strategies in reducing or preventing drunk driving.

Of the seven strategies rated, providing people who have drunk too much an alternate to self-driving is perceived to be the most effective. More than six of ten (63%) believe this strategy would be very effective.

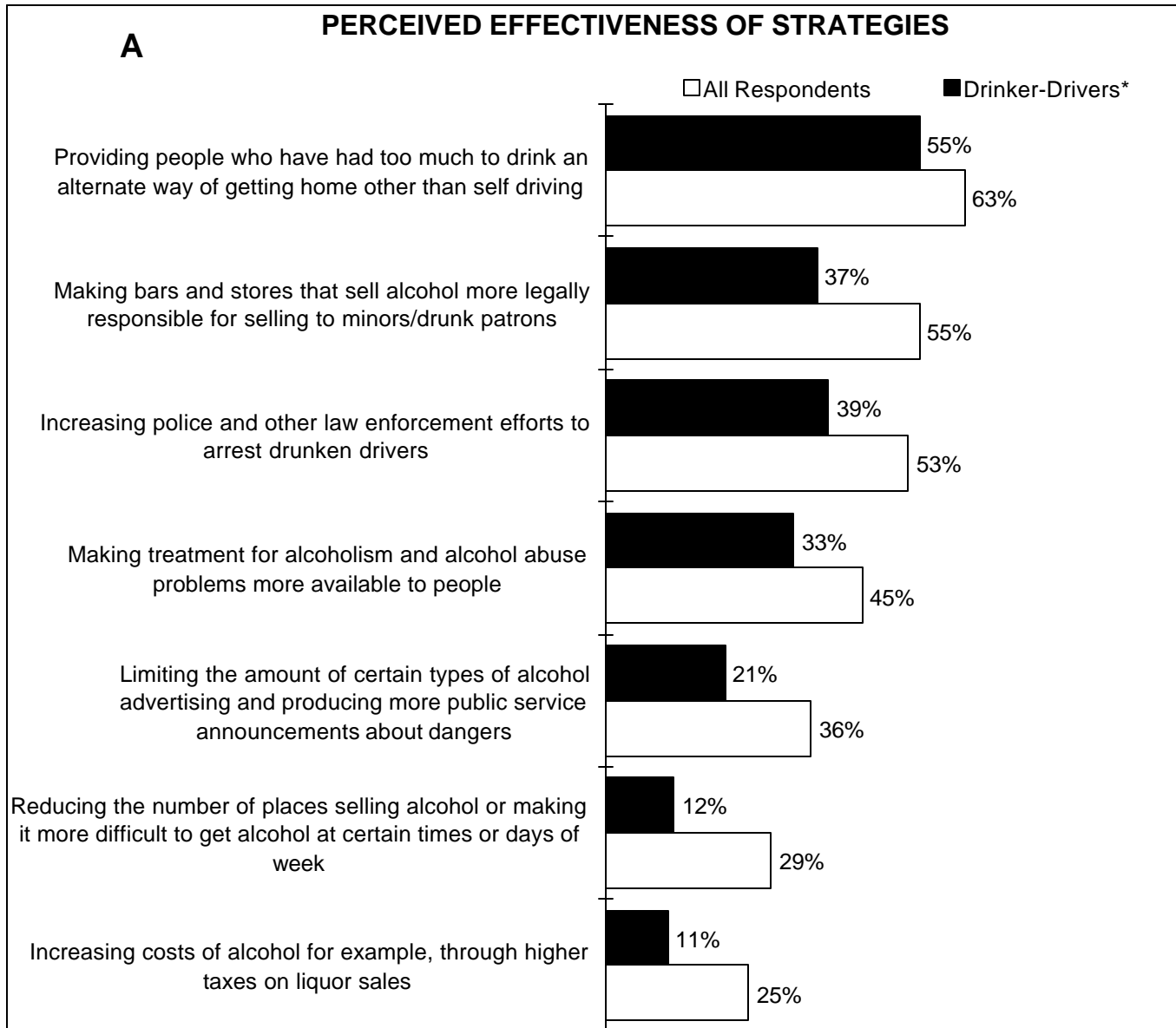
More than half feel that increasing law enforcement efforts to arrest drunk drivers (53%) and making those who sell alcohol more legally responsible for selling to minors or drunk patrons (55%) would be very effective at reducing drunk driving.

Nearly half (45%) of the driving age public also feels that making treatment for alcoholism/alcohol problems more available would be very effective.

Other strategies such as limiting certain types of alcohol advertising (36%), reducing the number of places selling alcohol (29%) and increasing the cost of alcohol (25%) are also viewed as effective strategies to reduce drunk driving by smaller proportions of the driving public.

Drinker-drivers are about 50% less likely to believe that most of the potential strategies would be very effective. Providing alternate ways of getting home is the one strategy a majority of drinker-drivers feel could be very effective. [Figure 30-A]

**FIGURE 30: PERCEIVED EFFECTIVENESS OF STRATEGIES  
TO REDUCE DRUNK DRIVING**



Qx: *In your opinion, how effective do you think each of the following strategies would be?* [Base= all respondents n=5733, drinker-drivers n=1215]





## Chapter 8: Racial and Ethnic Group Comparisons

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While global programs and strategies can be useful in reducing drinking-driving episodes and fatalities, one of NHTSA's goals is to identify differences in behaviors and attitudes among racial and ethnic groups so that specific actions can be taken to address the individual needs of different groups.

This section provides comparisons among non-Hispanic Whites, non-Hispanic Blacks, Asians, American Indian/Eskimos, and Hispanics in the following topics

- Prevalence and frequency of past-year drinking and driving behavior
- Estimates of total drinking and driving trips
- Riding with potentially unsafe drivers
- Use of designated drivers
- Perceptions of being stopped by police if drinking and driving
- Perceptions of being arrested and convicted if arrested for drinking and driving violation
- Attitudes about current drinking-driving violation penalties

### **Drove Within Two Hours of Consuming Alcohol, by Race/Ethnicity**

While 21% of the general driving age public reports having driven within two hours of consuming alcohol in the past year, this varies considerably by racial group. Asian (9%) and Hispanic (13%) persons are much less likely to have one or more drinking-driving episodes in the past year. Non-Hispanic Whites report the greatest prevalence. [Figure 31-A]

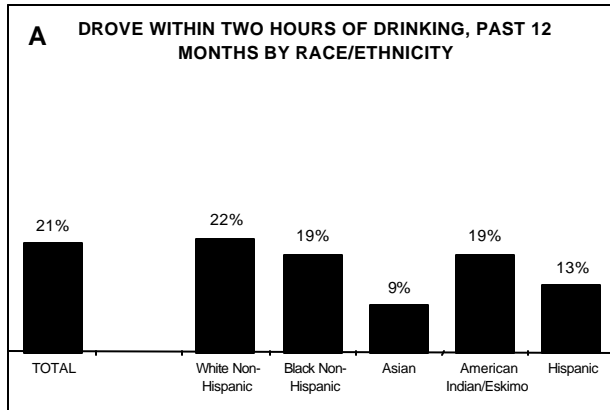
### **Frequency of Past-Year Drinking-Driving Trips**

Those who report past-year drinking-driving trips average 11 such trips each year. Non-Hispanic Black drinker-drivers report the highest yearly number of such trips (16.4). Asians report the smallest number on average, with only about four such trips a year. [Figure 31-B]

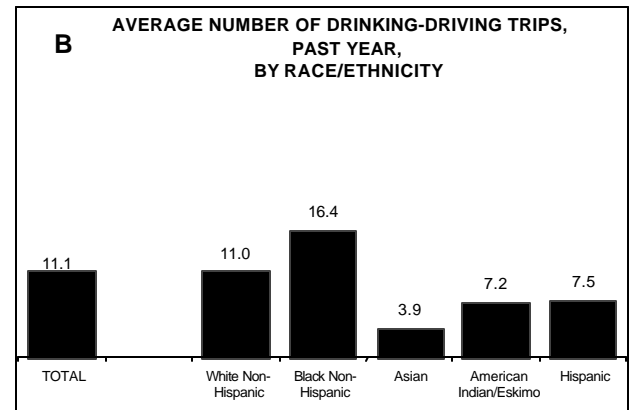
### **Estimated Yearly Drinking Driving Trips**

Non-Hispanic Whites make about 757 million drinking-driving trips in 1999 or 79% of all drinking-driving trips. Non-Hispanic Blacks made an estimated 96 million trips, while Hispanics account for 39 million or 4% of all such trips. [Figure 31-C&D]

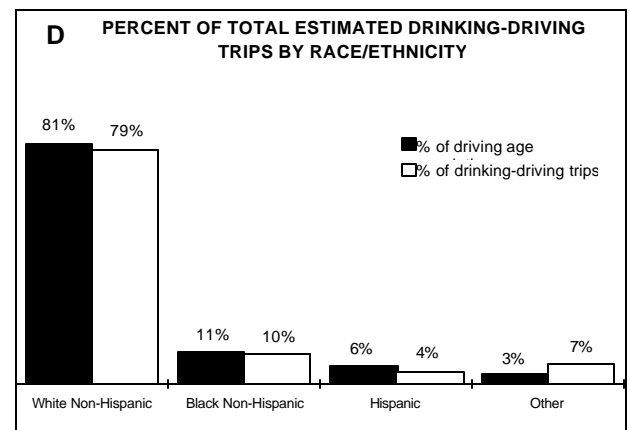
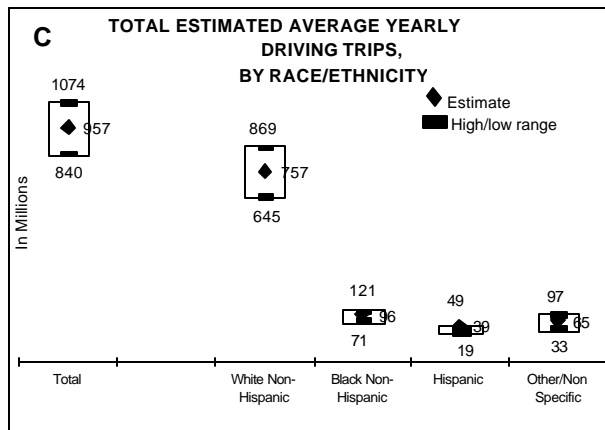
**FIGURE 31: PAST-YEAR DRINKING AND DRIVING BEHAVIOR**



Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: all respondents]



Qx: *How many times in the past 12 months have you driven within two hours after drinking any alcohol?* [Base: *drove after drinking, past year\**]



Qx: *In the past 30 days, how many times have you driven within two hours after drinking any* [Base: past year drinking-driving trips\* (calculated by multiplying the mean reported number of trips by the number respondents\*\*)]

\*\*Sample base for figures on this page:

	Total	Non-Hispanic White	Non-Hispanic Black	Asian	American Indian/Eskimo	Hispanic
Total	5127	4192	393	85	97	279
Drove After Drinking Past Year	1086	932	64	17*	21*	41*

\*Interpret with care; very small sample size

### **Riding with Drivers Who Might Have Consumed Too Much Alcohol To Drive Safely**

Hispanics and those of American Indian/Eskimo descent are slightly more likely to have ridden with someone who may have had too much to drink to drive safely (about 16% have). [Figure 32-A]

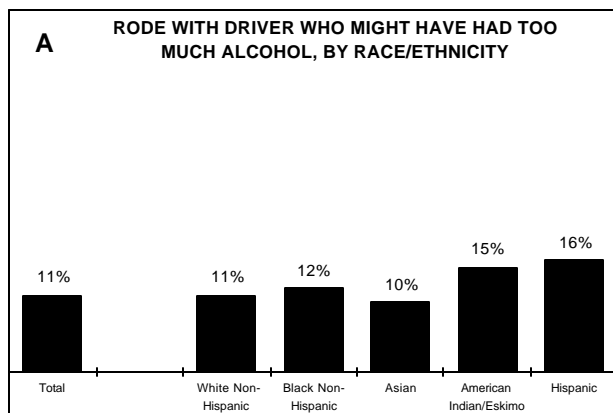
While they do not participate in such behavior more than others, when they do ride with potentially unsafe drivers, Non-Hispanic Blacks are more likely to say that they thought the driver was impaired before they got into the vehicle. [Figure 32-B]

### **Designated Drivers**

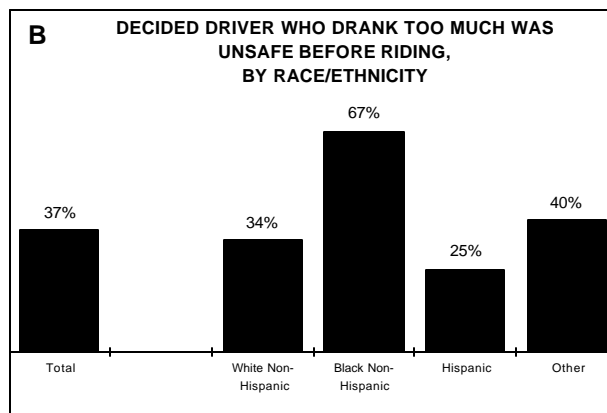
Non-Hispanic Whites and Blacks are the most likely to report having ridden with a designated driver in the past year. Asian Americans are less likely to do so with just 23% reporting this behavior. [Figure 32-C]

Persons of driving age of all the ethnicities and races are equally likely to have been a designated driver themselves. [Figure 32-D]

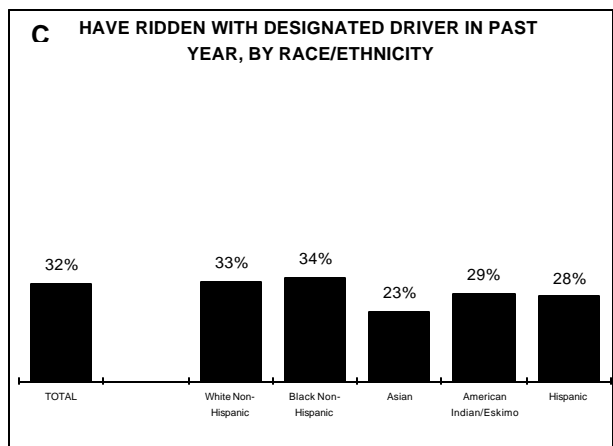
**FIGURE 32: RIDING WITH OTHERS**



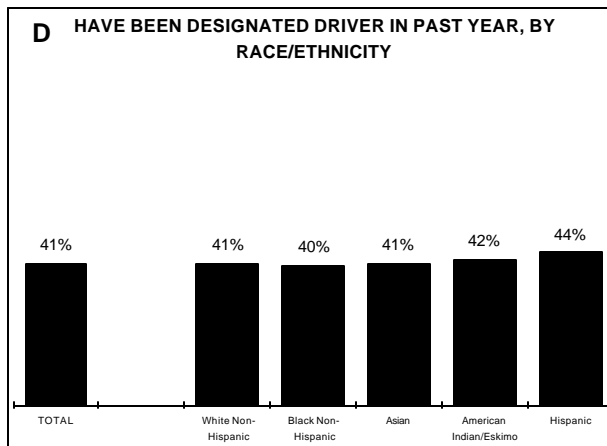
Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents]



Qx: *Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the vehicle?*



Qx: *In the past year, how many times have you ridden with someone who agreed to be the designated driver?* [Base: all respondents]



Qx: *In the past 12 months, have you ever been the designated driver when driving with others?* [Base: drivers]

\*\*Sample base for figures on this page:

	Total	Non-Hispanic White	Non-Hispanic Black	Asian	American Indian/Eskimo	Hispanic	Other
Total	5127	4192	393	85	97	279	--
Drove With Unsafe Drivers	562	428	46*	--	--	50*	39*

\*Interpret with care; very small sample size

### **Likelihood of Being Stopped by Police vs. Crash**

Persons of driving age, regardless of racial/ethnic background feel that a larger proportion of people who are impaired and drive will have a crash (43%) than will get stopped by the police (33%). Non-Hispanic Whites believe significantly fewer people will be stopped by police or have a crash as do other persons. [Figure 33-A]

### **Likelihood of Being Stopped/Arrested For Drinking and Driving**

Non-Hispanic Whites are also least likely to feel that one would be stopped by police for driving while intoxicated than most other parties. Asians and Hispanics are most likely to believe such an outcome would be at least very likely. [Figure 33-B]

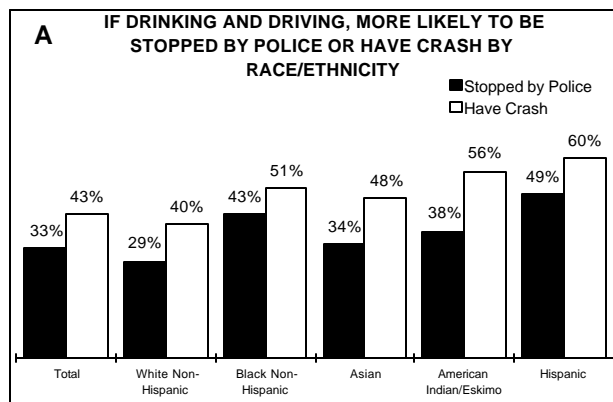
Despite differences in opinion on getting stopped, once stopped, those of different racial groups are equally likely to feel that an arrest is very likely or almost certain, [Figure 33-C], or that one would be convicted if arrested for a drinking-driving violation [Figure 33-D]

### **Perceptions of Current Laws and Penalties**

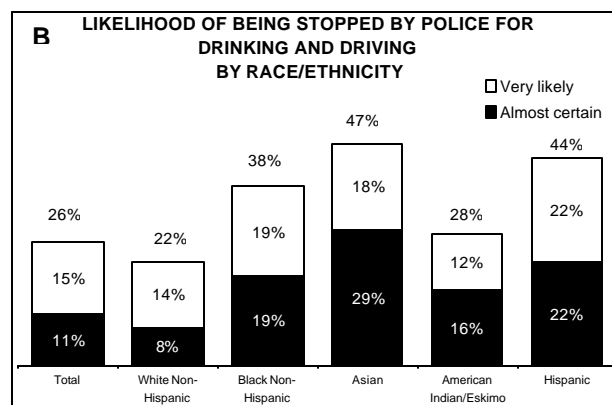
Those of American Indian/Eskimo descent are least likely to feel that the penalties for violating drinking-driving laws should be more severe than others of driving age (60% compared to 73% of others). [Figure 33-E]

While they don't feel drinking-driving penalties should be more severe, American Indian/Eskimos are least likely than others to feel that current laws for reducing drinking and driving are effective. Asians and Hispanics perceive the greatest effectiveness of these laws. [Figure 33-F]

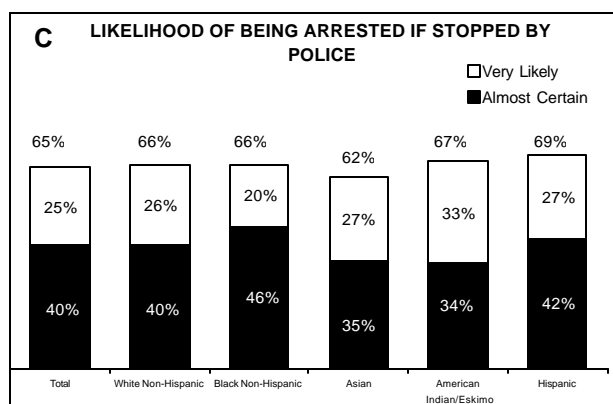
**FIGURE 33: PERCEPTIONS ABOUT LIKELY DRINKING-DRIVING OUTCOMES AND PERCEIVED EFFECTIVENESS OF LAWS AND PENALTIES**



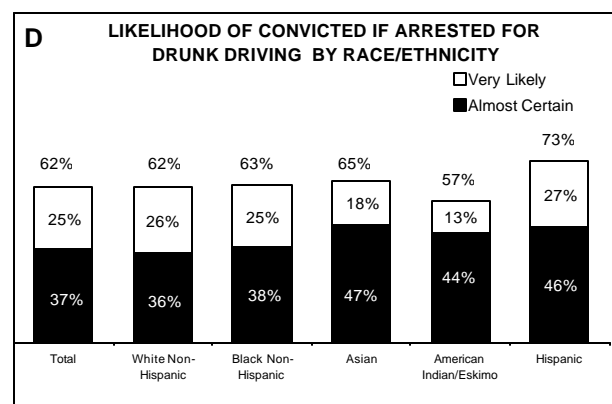
Qx: About what percent of drivers who are impaired by alcohol (and then drive) will -- be stopped by the police/have a crash? [Base: all respondents]



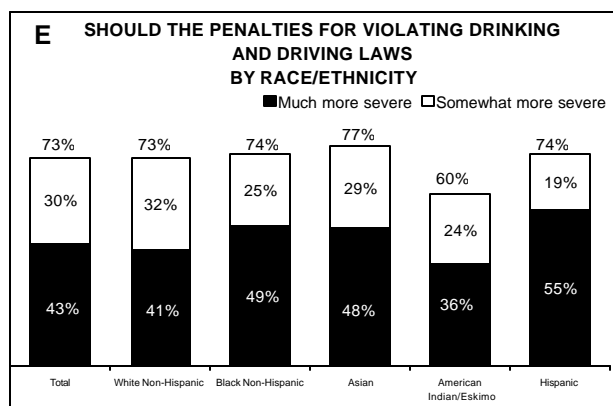
Qx: How likely are you to be stopped by a police officer for driving after you have had too much to drink? [Base: all respondents]



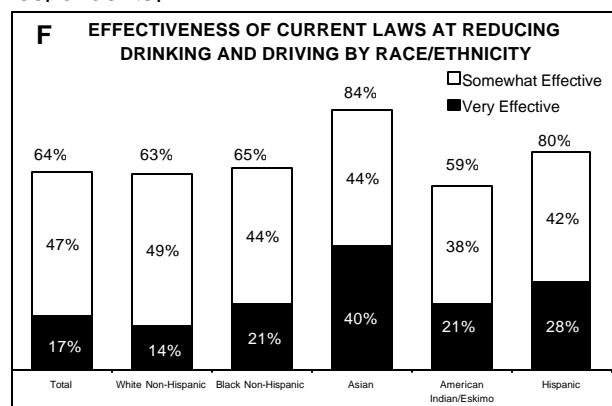
Qx: If a police officer stops you and charges you with breaking the drinking and driving laws, how likely would it be that you would be arrested?



Qx: If you were actually arrested for a drinking and driving violation, what is the likelihood that you will be convicted of that offense? [Base: all respondents]



Qx: In your opinion should the penalties for violating drinking and driving laws be...? [Base: all respondents]



Qx: In your opinion, how effective are current laws and penalties at reducing drinking and driving? [Base: all respondents]

\*Sample base for figures on this page:

Total Non-Hispanic White Non-Hispanic Black Asian American Indian/Eskimo Hispanic



Total	5127	4192	393	85	97	279
Drove After Drinking Past Year	1086	932	64	17*	21*	41*
*Interpret with care; very small sample size						

# Trends: 1991, 1993, 1995, 1997 and 1999

## Chapter 9: Trends in Drinking and Driving Attitudes and Behaviors: Trend Data from the Biennial Studies Conducted 1991, 1993, 1995, 1997 and 1999

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This 1999 survey marks the fifth in a series of biennial drinking and driving attitudes and behavior tracking surveys conducted by NHTSA. These studies of the driving age public provide NHTSA with continuing feedback on the changes in attitudes and behaviors related to drinking and driving. As the fifth measurement in the series, the 1999 data now allows for examinations of statistical trends. All changes reported as differences in this section are statistically significant. Significant differences were tested between two survey years or groups of years using a statistical test of independence, and with an analysis of variance test (ANOVA) to test trends over three or more periods.

This section presents trend data for measures that were included in the previous versions of this survey. Substantial changes in the survey instrument were made between the 1991 and 1993 administrations, with the addition of several key survey items. Thus, some tables in this section show data only for 1993, 1995, 1997 and 1999. Also, changes were made in 1999 to some questions which were previously trended, such that those trends are no longer possible.

In addition in 1999, a number of substantial changes to the survey instrument wording were undertaken. Several questions were moved to a different position in the survey, while other questions were worded differently than in previous versions. Tests of statistical significance were conducted to determine if these changes resulted in different responses than those obtained under the prior version format. Several of the survey items were found to be significantly changed under the new format and wording. (See Appendix A: Methods) In order not to lose comparability to the historical trend, a calibration method was used to adjust the historical data based on results of a “control group” sample.

In summary, for questions which were found to be statistically significantly different between the revised survey version and the control group (which contained the historical question order and wording), the control group data were calibrated or adjusted individually so that the proportion of respondents giving each response category matched that of the revised survey version. This calibration factor was then applied to the historical data for the affected question items.



Key topics addressed here include:

- Drinking and driving occurrences in the past year and the past 30 days
- Estimates of total drinking and driving trips
- Estimated BAC on most recent drinking-driving trips (1995 to 1999 only)
- Riding with a driver who may have consumed too much alcohol to drive safely
- Riding with and being a designated driver
- Attitudes about drinking and driving
- Perceptions about enforcement and penalties for drinking and driving
- Opinions about severity and effectiveness of drinking and driving laws and penalties
- Opinions on use of sobriety checkpoints
- Awareness and knowledge of BAC limits
- Measures of potential problem drinking and estimates of problem drinkers

The 1991 baseline measure only included persons age 16 to 64, rather than all persons age 16 and older. In order to provide accurate comparisons to the baseline, results presented in this section are only for those age 16 to 64, unless otherwise noted. Since the population base differs from that presented earlier in this report for 1999, some survey results will not match those presented earlier for the full population age 16 and older.

### **Drove Within Two Hours After Drinking Alcoholic Beverages**

#### *Total Population, Age 16-64*

After a decrease in the proportion of the driving age population 16 to 64 who drove within two hours of consuming alcohol was found in waves three and four (relative to the first two administrations), the prevalence of drinker-drivers has increased to levels similar to those found in 1991 and 1993.

Overall, 23% of the driving age population age 16 to 64 has driven within two hours of consuming alcoholic beverages. This is a significant increase from the 21% measured in 1995, and simulates the 24% measured in 1993 and the 23% found in 1991. [Figure 34-A]

#### *Gender Differences, Age 16-64*

After a significant decrease in drinking and driving incidence among men in 1995 from previous levels in 1993 and 1991 (28% versus 34% and 32% previously), the proportion of males who drove within two hours of drinking alcoholic beverages climbed back up from 1995 levels to 31% in 1997 and holds steady at 32% in 1999. [Figure 34-B]

After a small increase in drinking and driving incidence among females in 1993, this behavior stabilized at about 12% in 1995 and 1997. The 14% incidence measured in 1999 is a directional, but not significant increase over the 1997 measure.

#### *Age Differences, Age 16-64*

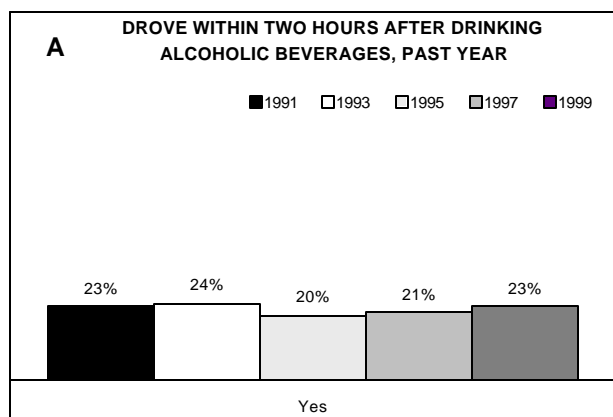
There are no clear patterns of change in the percentage of those who drove within two hours of drinking among age groups. The percentage had decreased among 30- to 45-year-olds from 1993 to 1995 but increased again in 1999. That of 46- to 64-year-olds has remained constant near 20%. The decreasing trend among 21- to 29-year-olds between 1991 and 1995 reversed in 1997 with 29% of this group reporting drinking-driving behavior in 1997 and 27% doing so in 1999. [Figure 34-C]

#### *Average Number of Times Drove After Drinking in Past Year, Age 16+*

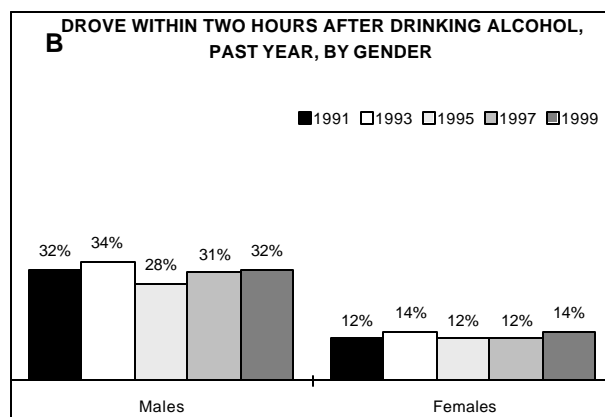
Among those of age groups who have driven within two hours of drinking in the past year, the average number of times they have done so has decreased significantly from an average of 13.4 annual drinking-driving trips in 1993 to a current level of 11.3 average trips per drinker-driver in 1999. [Figure 34D]

It appears that past-year drinking and driving trips has declined among 16- to 20-year-olds. These persons reported an average of about 12 episodes per year in 1993 and 1995, while an average of about 7 annual trips were reported in 1997 and just 4 trips in 1999. In contrast, the average number of drinking and driving occasions has increased among 21 to 29 year olds (about 15 trips on average compared to about 10 trips in 1995 and 1997). The average number of drinking-driving trips has decreased among those age 30 and older.

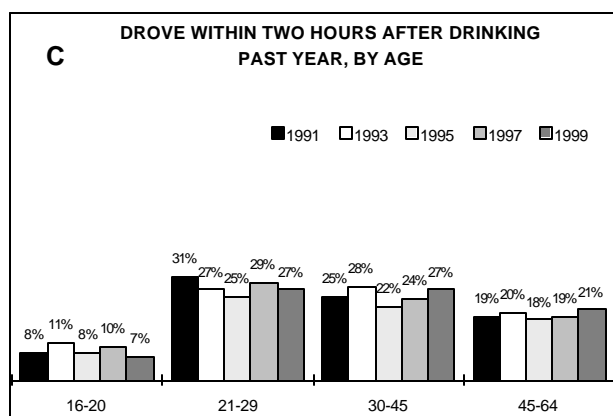
**FIGURE 34: TRENDS IN PAST-YEAR DRINKING AND DRIVING**



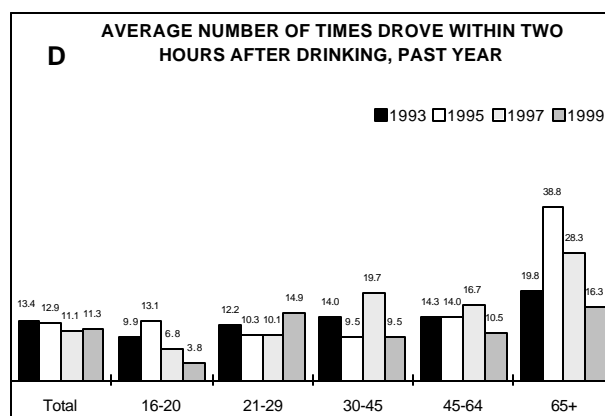
Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: all respondents aged 16-64\*]



Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: all respondents aged 16-64\*]



Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: all respondents aged 16-64\*]



Qx: How many times in the past 12 months have you driven within two hours after drinking any alcohol? [Base: drivers aged 16-64 who drove within two hours after drinking in the past year]

A chart showing sample bases for figures on this page can be found at the end of this section

\*Calibrated data 1991-1997

### **Drove Within Two Hours After Drinking Alcoholic Beverages in Past Month**

Drivers age 16–64 who drove within two hours of consuming alcohol in the past year (drinker-drivers) were asked how many times they had done so in the past 30 days. The 30-day measure is used since recall of the time period is likely to be more accurate than that for past the year.

### **Total Drivers Who Drank Any Alcohol, Age 16– 64**

The proportion of drinkers who drive who have driven within two hours of consuming alcoholic beverages in the past 30 days decreased significantly between 1991 and 1995, from about 26% to 21%. The trend has leveled off since 1997 with 21% of 16- to 64-year-old drivers who drink reporting driving after drinking in the past-month. [Figure 35-A]

### **Average Number of Past- Month Drinking-Drivering Trips, Age 16– 64**

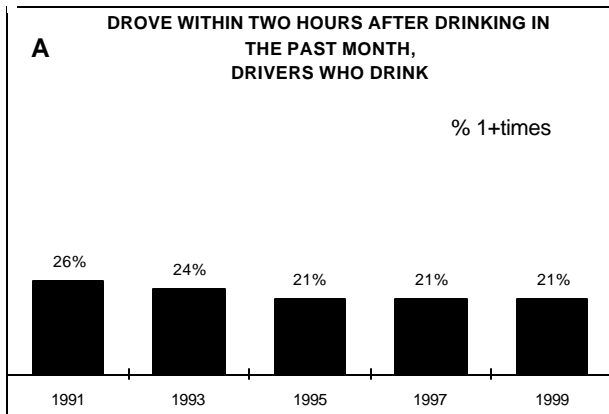
The average number of past-month drinking-driving trips among drivers who had driven within two hours of drinking alcohol in the past year, has declined significantly from 1991 to 1995, from an average of about 2.3 trips in 1991, to 2.0 trips in 1993 and to 1.5 average trips in 1995. This level of about 1.5 average monthly trips has remained consistent since 1995 (the 1997 and 1999 measures are not statistically different from the 1995 measure). [Figure 35-B]

### **Average Number of Past- Month Drinking-Drivering Trips, Gender and Age Differences**

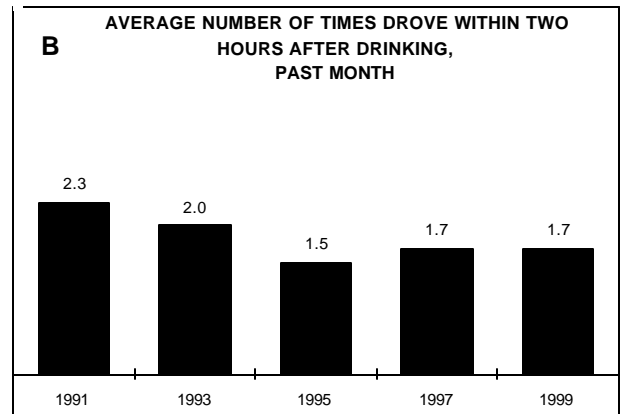
The average number of past-month drinking-driving trips declined significantly from 1991 levels among both males and females. Males declined from 2.6 average trips in 1991 to 1.7 trips in 1995. The current level of 1.9 average trips is still significantly lower than the baseline measure in 1991. Females showed a significant drop between 1991 and 1993 from 2.0 to 1.0 average trips. This level of about one trip per month has remained statistically consistent since 1993. [Figure 35-C]

Past-month drinking-driving trips declined significantly since 1991 among drinking-drivers in all age groups. The 46- to 64-year-old group has shown a consistent decline from a high of 2.5 average monthly drinking-driving trips in 1991 to 1.6 in 1997. The 1.9 average trips in 1999 is not significantly higher than that of 1997. Those age 21 to 45 have also reduced these trips overall since 1991, but currently show a slight increase off of 1995 measures. Also, 16- to 20-year-olds have shown a consistent decline since 1993 cutting the number of drinking-driving episodes by half. [Figure 35-D]

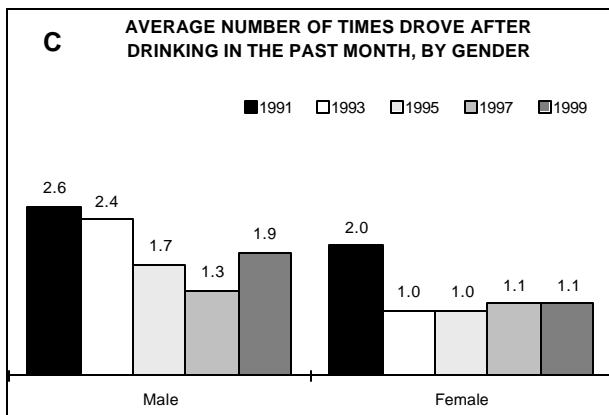
**FIGURE 35: TRENDS IN DRINKING AND DRIVING, PAST MONTH**



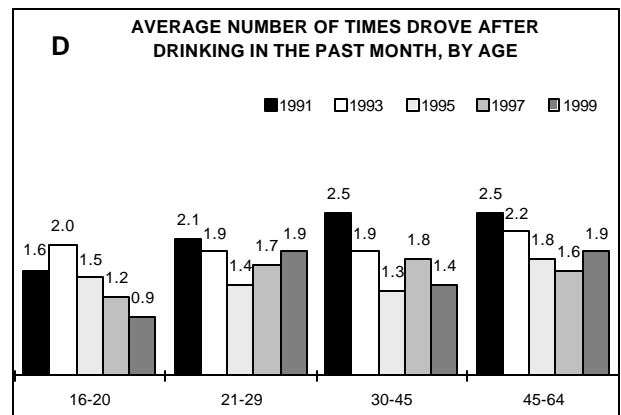
Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drivers aged 16-64 who drank alcohol in past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drivers aged 16-64 who drank alcohol in past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: aged 16-64 drove after drinking in the past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: aged 16-64 drove after drinking in the past year]

A chart showing sample bases for figures on this page can be found at the end of this section.



## National Estimates of Total Drinking-Driving Trips

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Estimates of total drinking driving trips based on self-reported data were performed to estimate the total drinking-driving trips for the driving public. For the purposes of this analysis, alcohol-impaired driving was defined as any positive response to the question “In the PAST 30 DAYS how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages?”

### Calculation of Drinking-Driving Trips

As the past 30-day measure was felt to be more reliable than the self-reported past 12-month measure, the total number of drinking-driving trips was calculated for each respondent by multiplying the self-reported number of trips in the past month by 12 to obtain a yearly total. The number of trips was summed across respondents and is reported by age and gender in Figure 35.

It is important to note that the total trip data presented here may not reflect the true number of alcohol-impaired driving trips made each year for a number of reasons: people may not be able to accurately recall the number of such trips, the previous month may not be indicative of the respondent’s total year drinking-driving trips and people may under-report such behavior if they feel it is socially desirable to do so. This analysis is meant to provide an approximation of the range of possible drinking-driving trips by gender and age.

### TRENDS in Total Drinking-Driving Trips, Total Persons Age 16 and Older

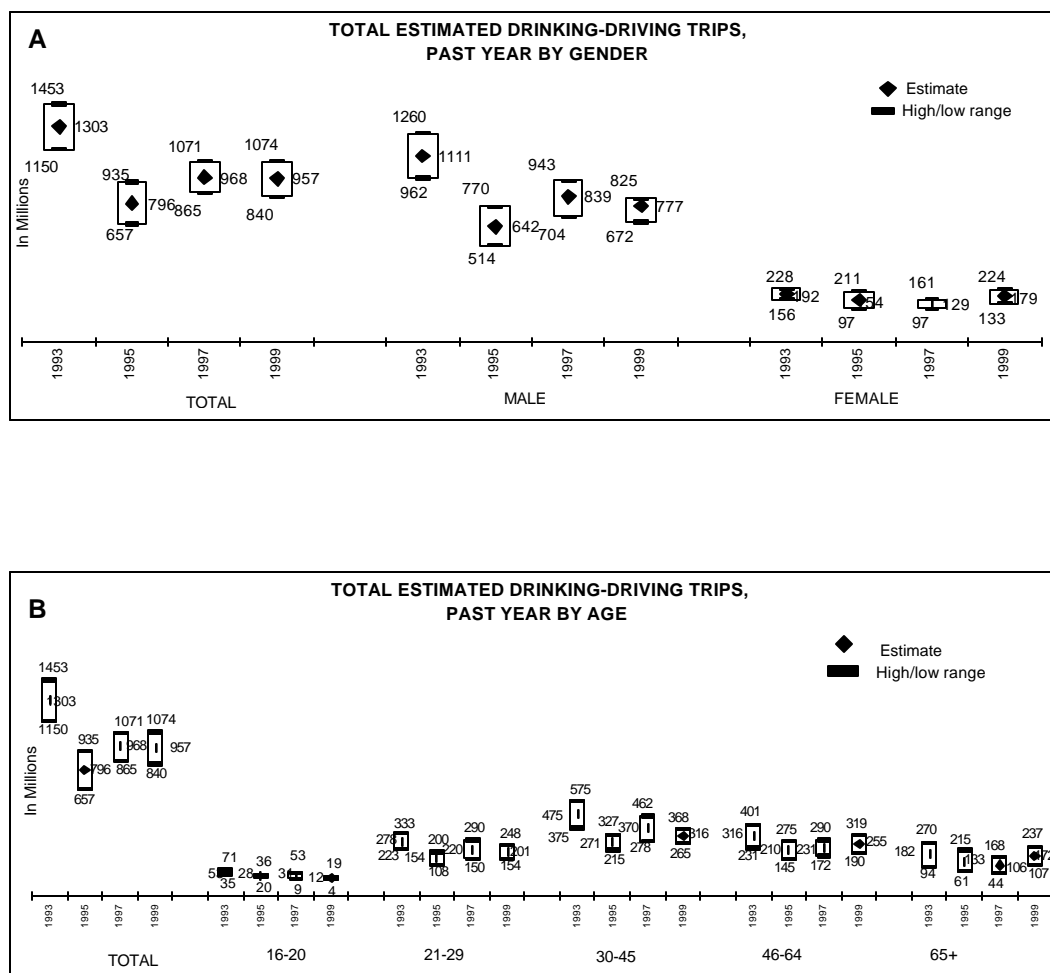
Overall, drivers who have consumed alcoholic beverages within two hours of starting their driving trip made an estimated 957 million ( $\pm 117$  million) driving trips in 1999. This estimated number is similar to the estimated 968 million trips in 1997 but is significantly lower than that for 1993 of about 1.3 billion ( $\pm 153$  million) drinking-driving trips. The error ranges for each year by gender and age appear at the bottom of Figure 36.

It should be noted that the sample sizes for those under age 21 and 65 and older are very small, resulting in large error ranges. The error range for 1999 trip estimates of 16- to 20-year-olds is  $\pm 7$  million trips, (around the estimated 12 million trips) while trips by those age 65+ could vary  $\pm 65$  million trips from the 172 million trips shown in Figure 36-B.

While total drinking-driving trips have declined for both males and females since 1993, females report a higher total number of trips in 1999 than in 1997. Total trips have declined among all groups since 1993, dropping most significantly among 16 to 20 year olds (from 53 million to 12 million trips).

EDITOR’S NOTE: While past month trips were thought to be a more accurate representation than past 12 month recall, the reader is cautioned that a seasonal bias is possible in such reporting. If the past year measure were used rather than the past month (projected out for 12 months), the total number of trips would be approximately 872 million rather than 957 million trips.

**FIGURE 36: NATIONAL ESTIMATES OF TOTAL YEARLY DRINKING-DRIVING TRIPS**



\*Total drinking-driving trips were estimated by multiplying the number of drinking-driving trips in the past 30 days by 12 to yield a yearly estimate for each respondent. Total trips were summed across all respondents and data were projected to the total U.S. population age 16 or older.

Error range for total number of trips by gender and age (in millions):

1999: Total  $\pm 117$ ; male  $\pm 107$ ; female  $\pm 46$ ; 16-20  $\pm 7$ ; 21-29  $\pm 47$ ; 30-45  $\pm 52$ ; 46-54  $\pm 64$ ; 65+  $\pm 65$ .

1997: Total  $\pm 158$ ; male  $\pm 153$ ; female  $\pm 41$ ; 16-20  $\pm 22$ ; 21-29  $\pm 73$ ; 30-45  $\pm 1142$ ; 46-54  $\pm 61$ ; 65+  $\pm 51$ .

1995: Total  $\pm 139$ ; male  $\pm 128$ ; female  $\pm 57$ ; 16-20  $\pm 8$ ; 21-29  $\pm 46$ ; 30-45  $\pm 56$ ; 46-54  $\pm 65$ ; 65+  $\pm 72$ .

1993: Total  $\pm 153$ ; male  $\pm 149$ ; female  $\pm 36$ ; 16-20  $\pm 18$ ; 21-29  $\pm 55$ ; 30-45  $\pm 100$ ; 46-54  $\pm 85$ ; 65+  $\pm 88$ .



### **Average Number of Drinks on Last Drinking-Driving Occasion**

Drinker-drivers average slightly over two and one-half alcoholic drinks on their most recent drinking and driving occasion. While this average number of drinks has remained consistent since 1995, males report slightly more drinks on average in 1999 than was found in 1997. Persons age 16-20 report consuming the largest number of drinks per episode than other drinker-drivers. [Figure 37-A]

The number of drinks consumed decreases with age consistently across all measurements since 1995.

### **Length of Time Between Drinking and Driving**

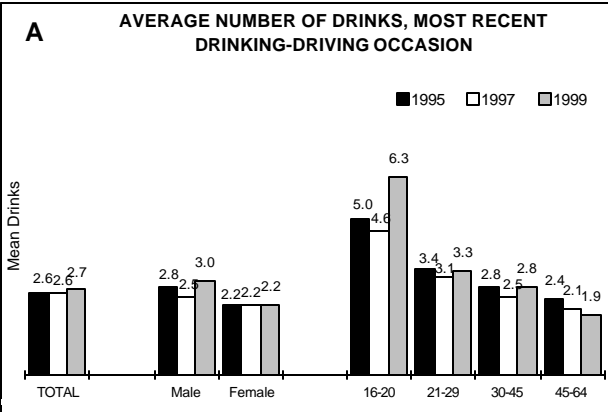
Drinker-drivers begin driving an average of about 44 minutes after their last drink, with women waiting a bit longer than their male counterparts. Time waited before driving is consistent between 1997 and 1999. [Figure 37-B]

### **Estimated Calculated BAC of Most Recent Occasion**

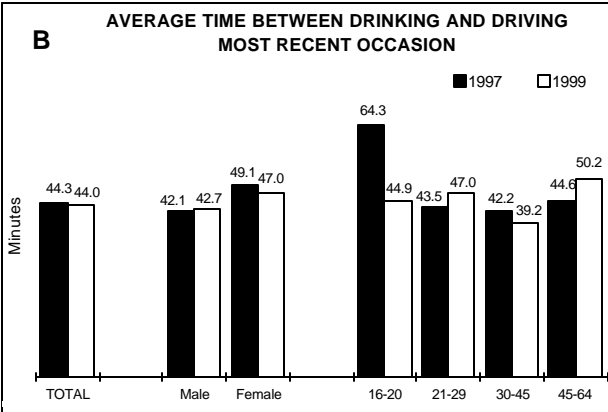
Drinker-drivers average a blood alcohol concentration (BAC) level of about .04 on their most recent drinking-driving occasion (see page 4 for calculation). This is slightly higher than the .03 BAC estimated in 1995 and 1997. [Figure 37-C]

The average calculated BAC has increased since 1995 among 16 to 20 year olds (.12 BAC as compared to .07) and those in their 20's (.03 to .05 in 1999). [Figure 37-D]

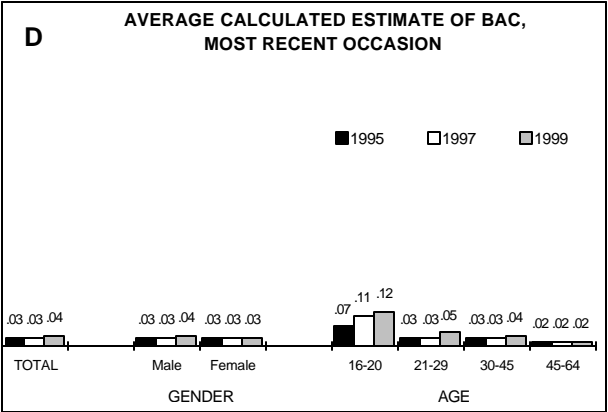
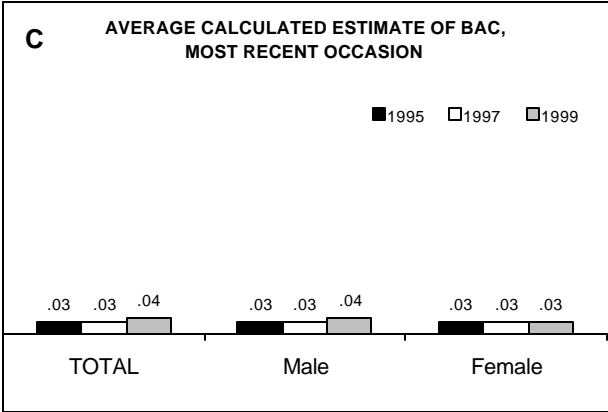
FIGURE 37: TRENDS IN CALCULATED ESTIMATE OF BAC MOST RECENT OCCASION



Qx: How many drinks did you have on that (most recent) occasion? [Base: drinker-drivers age 16-64]



Qx: How long after your last drink did you start driving? [Base: drinker-drivers age 16-64]



BAC calculated using NHTSA BAC estimation formula using gender, weight, number of drinks consumed, length of time drinking and length of time between last drink and driving

### **Rode With Driver Who Consumed too Much Alcohol to Drive Safely**

#### *Total Population, Age 16-64*

The proportion of persons age 16–64 who have ridden with someone in the past year who they thought may have had too much alcohol to drive safely has declined significantly since 1991, from about 15% to a level of 11% reported in both 1995 and 1997, and 12% in 1999. [Figure 38-A]

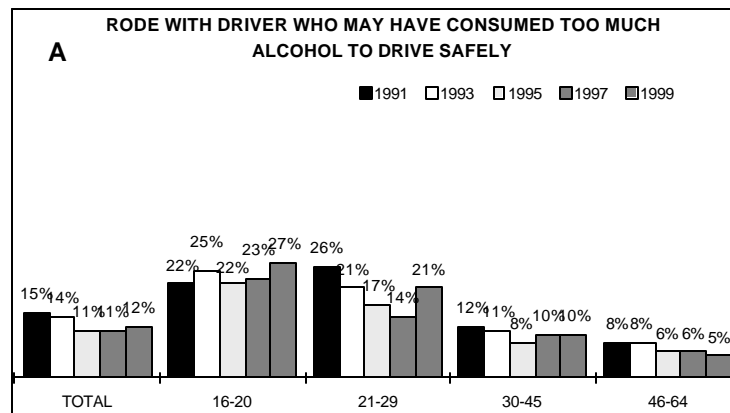
#### *Age Differences, Age 16-64*

The percentage of those who report being a passenger of a driver who may have consumed too much to drive safely has declined or remained consistent for all those age 30 or older across the five measures of the study. While reports of such behavior declined steadily among the 21- to 29-year-old group between 1991 and 1997, these persons report a significant increase in this behavior in 1999. Those under age 20 also report higher prevalence in 1999 than in previous measures. Most other age groups have remained consistent over time.

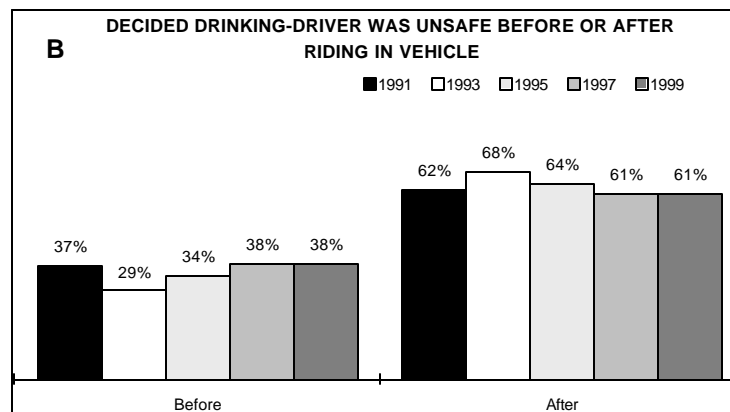
#### *Point at Which Decided Driver Was Unsafe, Age 16-64*

There has been a significant increase in the proportion of persons who decided their driver was unsafe **before** they were riding with them since 1993, from 29% to a current level of 38%. This two-year increase from 1993 to 1995 and to 1997 followed a large decline between 1991 to 1993.

**FIGURE 38: EXPERIENCE AS PASSENGER OF POTENTIALLY UNSAFE DRINKING- DRIVER, PAST YEAR**



Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents aged 16-64]



Qx: *Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the motor vehicle?*

[Base: aged 16-64 rode with driver who may have had too much alcohol to drive safely]

A chart showing sample bases for figures on this page can be found at the end of this section

### **Have Ridden with Designated Driver in Past Year, Age 16– 64**

While the 1995 study showed a decline in the proportion of the driving age public age 16–64 who had ridden with a designated driver in the past year over the previous year, the measures from 1997 and 1999 show riding with a designated driver has risen back to its 1993 level among persons age 16–64. The 1997 increase over the 1995 survey holds for both males and females. Younger persons, particularly those age 16 to 29 are significantly more likely than older persons to drive with a designated driver.

[Figure 39-A]

### **Have Been a Designated Driver in Past Year, Age 16– 64**

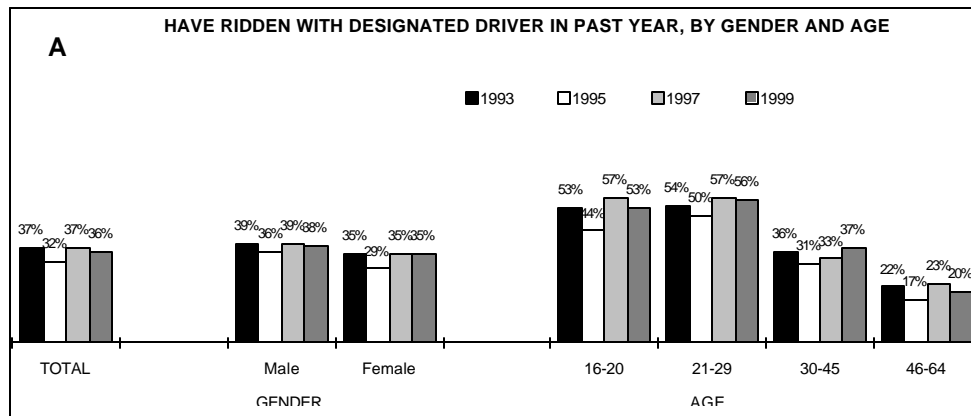
A significantly greater percentage of 16- to 64-year-old drivers reported that they, themselves have been a designated driver in the past year in 1997 than was true in either 1993 or 1995. While the 1999 measure is below that of 1997, it is still above the 1993 or 1995 measure. In 1999, about 48% of all drivers age 16 to 64 report that they have been a designated driver at least once in the past year. This compares to 39% in 1995 and 42% in 1993. Reported levels of being a designated driver have decreased significantly among those age 16 to 20 since 1997 (61% as compared to 76% in 1997). Those under age 30 are the most likely to report having been a designated driver in the past year. [Figure 39-B]

### **Maximum Number of Drinks a Designated Driver Should Have, age 16– 64**

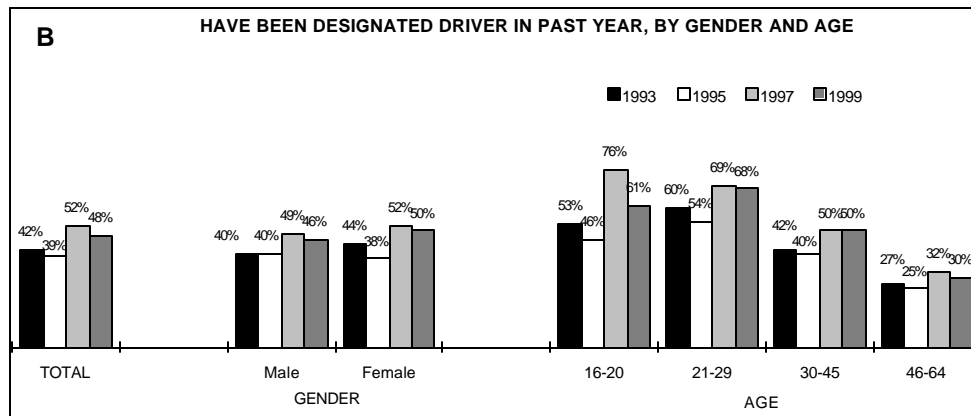
The driving age public 16 to 64 years old believes that on average, a designated driver should consume no more than one-half of an alcoholic drink before driving. This belief is held by both males and females and across all age groups. [Figure 39-C]



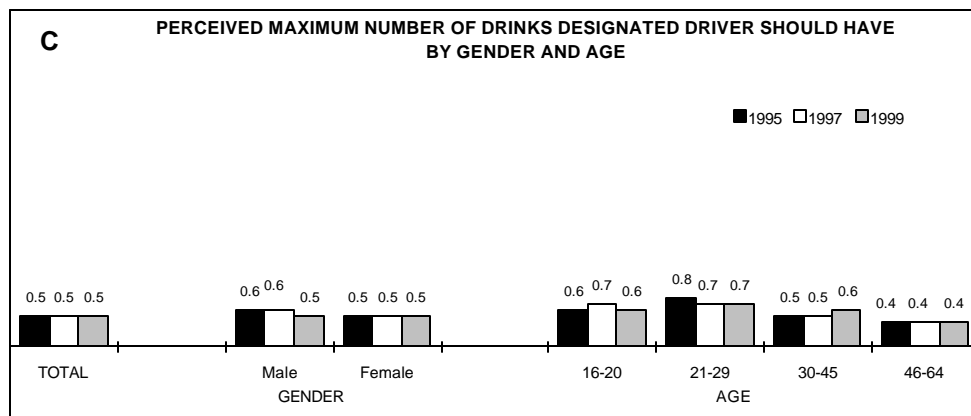
**FIGURE 39: TRENDS IN DRIVING WITH AND BEING A DESIGNATED DRIVER**



Qx: In the past 12 months, have you ridden anywhere with someone else who agreed to be the designated driver? [Base: all respondents aged 16-64]



Qx: In the past 12 months, have you ever been the designated driver when driving with others? [Base: drivers aged 16-64]



Qx: What is the maximum number of drinks a person should have if he or she is a designated driver? [Base: all respondents age 16-64]

A chart showing sample bases for figures on this page can be found at the end of this section.

### **Perceptions of Drinking and Driving as a Threat to Personal Safety, Age 16- 64**

Overall, 80% of those age 16 to 64 feel that drinking and driving is a major threat to the personal safety of themselves and their family, while an additional 17% see it as at least a minor threat. The proportion of those saying drinking and driving is a “major” threat has decreased since 1991, with the largest drop coming between 1993 and 1995. [Figure 40-A]

### **Drinking-Drivers Problem Drinkers, Age 16- 64**

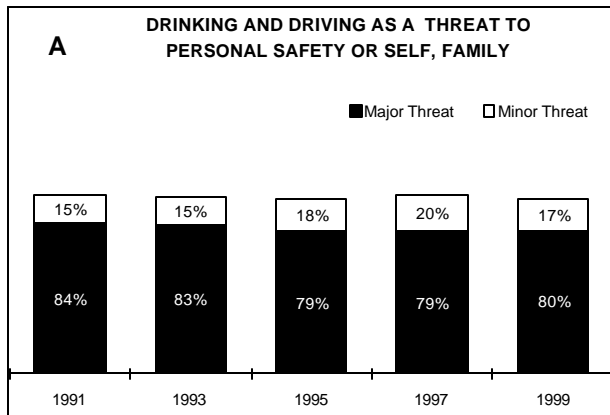
Nearly two-thirds (64%) of persons age 16 to 64 agree with the statement that most people who drive after drinking too much are alcoholics or problem drinkers. The proportion of people who “strongly agree” with this notion has increased significantly since 1991. The overall proportion of those who agree strongly with this view increased from 25% in 1991 and 1993 to 31% in 1995, 32% in 1997 and to 36% in 1999. [Figure 40-B]

### **Should People Be Allowed to Drive if They Have Been Drinking at All, Age 16- 64**

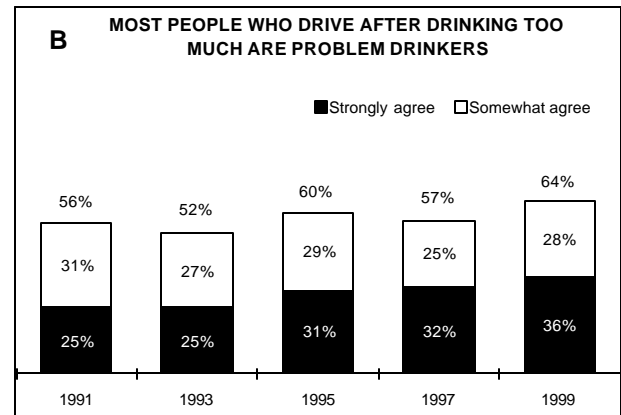
Overall, two-thirds (66%) of those age 16 to 64 agree with the view that people should not be allowed to drive if they have been drinking at all. Almost half (45%) strongly agree with this view, while about 21% say they agree somewhat. This proportion saying they agree strongly has held constant since the 1991 baseline when 43% agree strongly. [Figure 40-C]

**FIGURE 40: TRENDS IN ATTITUDES ABOUT DRINKING AND DRIVING**

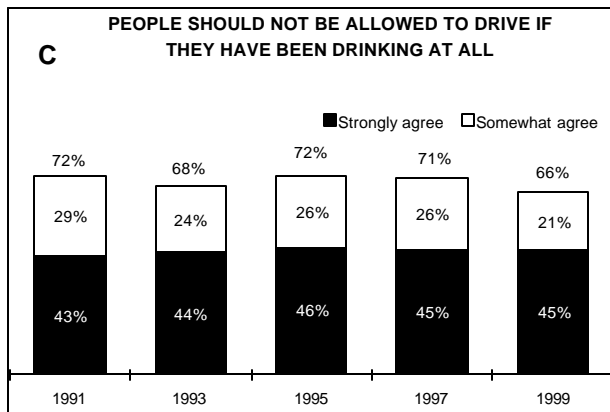
Qx: For each of the following statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree. [Base: all respondents]



Qx: In your opinion, how much is drinking and driving by other people a threat to the personal safety of you and your family? Would you say it is a major threat, a minor threat, or not a threat? [Base: all respondents age 16-64]



Qx: Most people who drive after drinking too much are alcoholics or problem drinkers.



Qx: People should not be allowed to drive if they have been drinking at all.

A chart showing sample bases for figures on this page can be found at the end of this section.

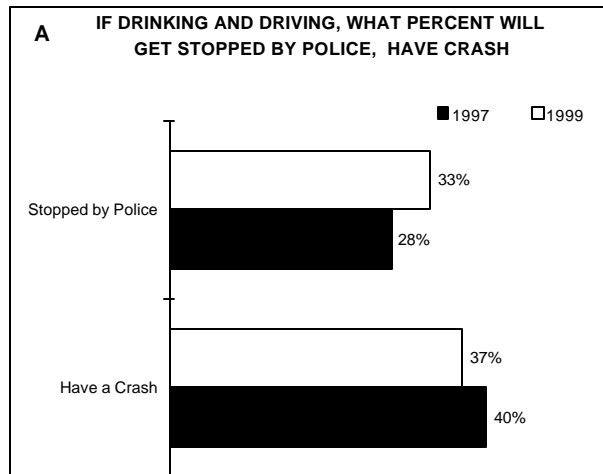
### **More Likely to be Stopped By Police or Get in a Crash if Drinking and Driving? Age 16- 64**

The driving age public 16 to 64 believes that about 33% of those who drink too much and then drive will be stopped by the police. In contrast, they believe that on average, 37% will get in a crash. In 1999, people feel that a larger proportion will have a crash (33%) than was true in 1997 (28%). [Figure 41-A]

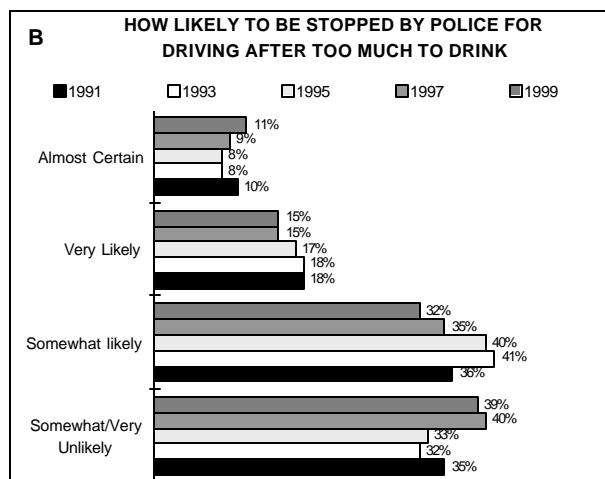
### **Likelihood of Being Stopped By Police if Driving After too Much to Drink, Age 16- 64**

Overall, 26% think that it is very likely to almost certain that they will get stopped by the police if they are driving after having too much to drink. An additional 32% feel it is somewhat likely that they would get stopped by police in this circumstance. The driving age public is becoming less likely to believe drinking-drivers will get stopped by the police. The proportion that says it is very or somewhat unlikely has increased from about 32% in 1993 to 39% in 1999. [Figure 41-B]

**FIGURE 41: TRENDS IN PERCEPTIONS ABOUT ENFORCEMENT AND PENALTIES**



Qx: Using a percentage scale from 0% to 100%, in your opinion, about what percentage of who are impaired will get stopped by the police/have a crash? [Base: all respondents aged 16-64]



Qx: How likely are you to be stopped by a police officer for driving after you have had too much to drink? [Base: all respondents aged 16-64]

A chart showing sample bases for figures on this page can be found at the end of this section.

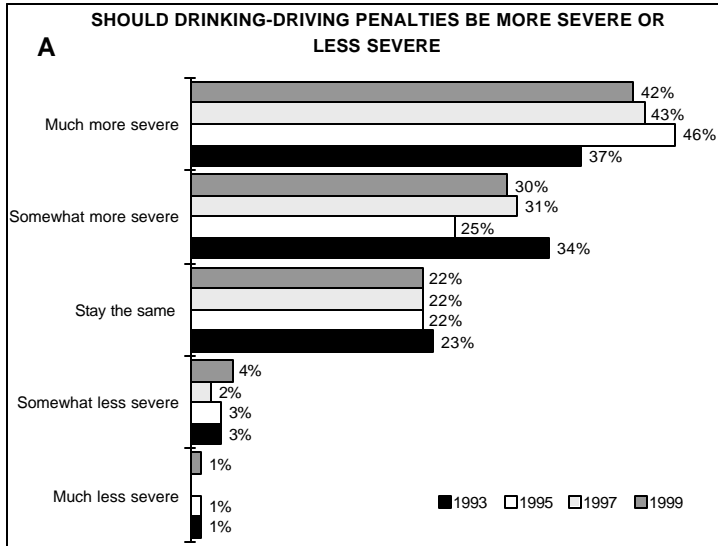
### **Should Penalties be More or Less Severe? Age 16- 64**

While there was a large increase in the perception that penalties for those who violate drinking and driving laws should be more severe between 1993 and 1995, current sentiment has about 42% feeling that drinking-driving penalties should be much more severe. This is similar to the measure in 1997. The driving age public (16 to 64) continues to think laws should be somewhat more severe than was true in 1995. [Figure 42-A]

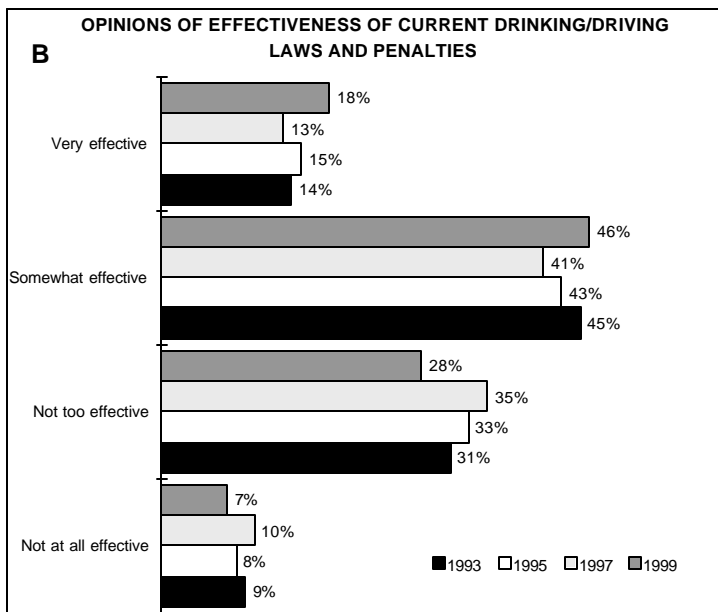
### **Perceived Effectiveness of Current Laws and Penalties, Age 16- 64**

The decline from 1993 to 1997 in the perception that drinking-driving laws and penalties are effective is reversed in 1999. In 1993 and 1995 approximately 58% of the driving age public felt that drinking-driving penalties were very or somewhat effective. This dropped to 54% perceived effectiveness in 1997. In contrast, 64% see current laws and penalties as at least somewhat effective. Still, 35% of those age 16 to 64 feel that these laws and penalties are not effective. [Figure 42-B]

**FIGURE 42: TRENDS IN PERCEPTIONS ABOUT SEVERITY AND EFFECTIVENESS OF LAWS AND PENALTIES**



Qx: *In your opinion, should the penalties for violating drinking and driving laws be...?*  
 [Base: all respondents aged 16-64]



Qx: *In your opinion, how effective are current laws and penalties at reducing drinking and driving?*  
 [Base: all respondents aged 16-64]

### **Have Seen a Sobriety Checkpoint, Past Year**

More than one-third (36%) of driving age public age 16 to 64 have seen a sobriety checkpoint in 1999. This is a significant increase from the 32% in 1995 and 1997 who say they saw such a checkpoint. Those over age 45 are consistently less likely to have seen a sobriety checkpoint. [Figure 43-A]

### **Should Sobriety Checkpoints Be Used More or Less Frequently?**

#### ***Total Persons, Age 16–64***

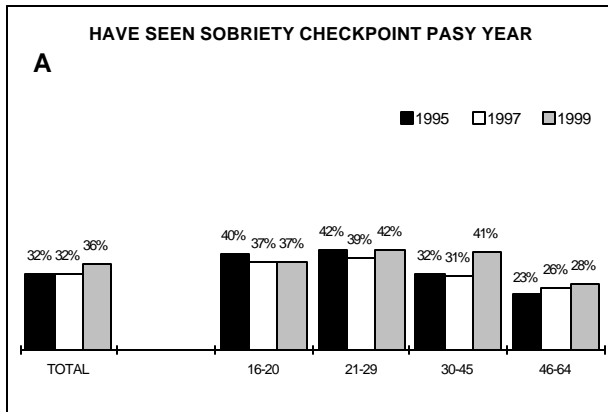
There is somewhat greater support for more frequent use of sobriety checkpoints currently than was found in 1993. About 64% feel that sobriety checkpoints should be used more frequently as compared to 62% who felt this way in 1993. A consistent proportion of about one-quarter, feel the frequency should remain at current levels. [Figure 43-B] There has been no significant change in the percentage of those age 16 to 64 who say they have been stopped by a sobriety checkpoint (about 29% have).

#### ***Drinking-Drivers, Age 16–64***

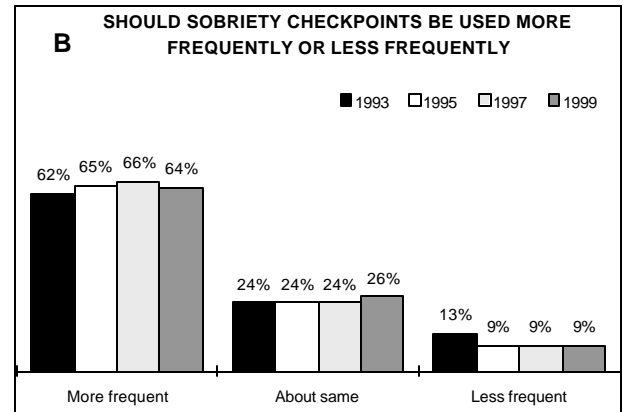
Drinking-drivers age 16 to 64 are less likely than previously to feel that checkpoints should be used more frequently. There has also been a decrease in the support of more frequent checkpoint use among drivers who drink, but who have not driven within two hours of drinking. About six of ten drivers who drink but do not drive after drinking supported more frequent use of checkpoints currently as compared to about 70% who supported more frequent use in 1997. [Figure 43-C]



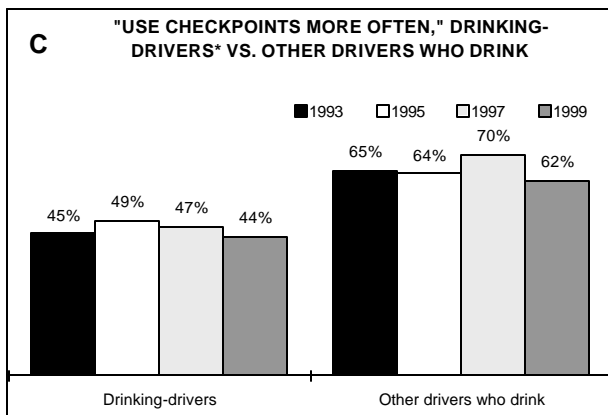
**FIGURE 43: TRENDS IN PERCEPTIONS ABOUT SOBRIETY CHECKPOINTS**



Qx: In the past 12 months, have you seen a sobriety checkpoint? [Base: all respondents aged 16-64]



Qx: Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently? [Base: all respondents aged 16-64]



Qx: Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently? [Base: aged 16-64 specified in the chart]

\*Drinking-drivers: Drove within two hours after drinking in the past year

A chart showing sample bases for figures on this page can be found at the end of this section.

### **Awareness of BAC Levels**

About eight in ten persons of driving age have heard of BAC (blood alcohol concentration) levels. There was a slight decrease in those reporting awareness in 1999 (80%) from 1997 (84%). [Figure 44-A]

### **Knowledge of State's BAC Limit**

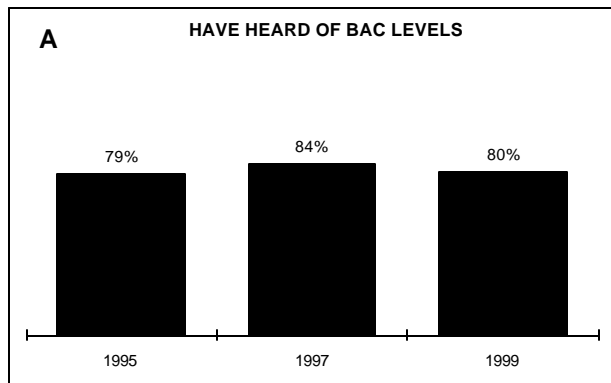
Respondents were asked what they thought their state's BAC legal limit was. This answer was compared against the actual BAC limit for the respondent's state at the time of the study. There has been a significant increase in the observed knowledge level of the states' BAC since 1995. In 1995, just one in five (20%) persons could correctly name the BAC limit in their state. This increased to 29% in 1997 and remains at about 28% observed awareness in 1999. [Figure 44-B]

Knowledge differs for those living in .08 and .10 states, likely due to the publicity surrounding the change to .08 BAC limits in some states. About one in three (33%) persons in .08 BAC states know their state's legal limit as compared to just 22% of those who live in .10 BAC states. [Figure 44-C]

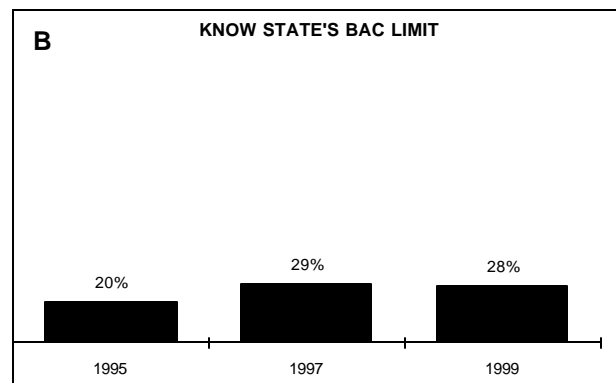
### **Support for .08 BAC State Limit**

Support for a state BAC limit of .08 or lower has increased since 1997. Currently 68% of the driving age public who have heard of BAC limits are in support of a .08 BAC for their state. This is up from 56% in 1997. Support is greatest from residents in states with a current BAC of .08 (84% support this level).

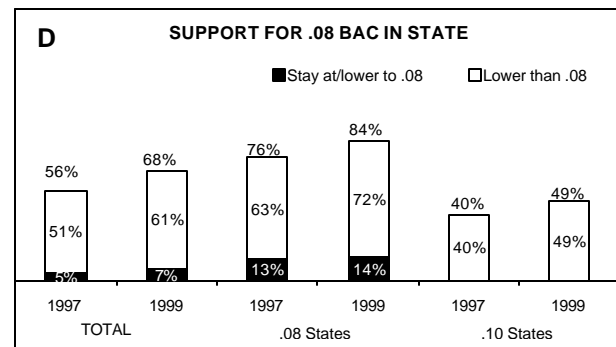
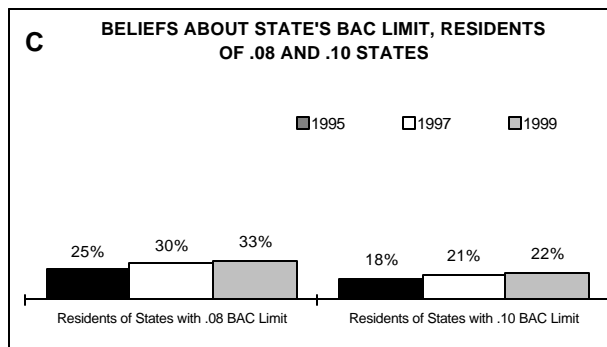
**FIGURE 44: TRENDS IN AWARENESS AND KNOWLEDGE OF BAC LEVELS AND LEGAL LIMITS**



*Qx: The amount of alcohol in a person's body can be measured in terms of "Blood Alcohol Concentration" which is often called BAC level. Have you heard of blood alcohol concentration or BAC levels? [Base: all respondents]*



*Qx: To the best of your knowledge, what is the specific BAC limit for your state at which a person would be considered legally intoxicated? [Base: all respondents-answers were compared with actual BAC limits for each respondent's state]*



*Qx: The BAC limit in your state is currently [.10/.08] in your opinion should the BAC in your state be [lowered to .08/stay at current .08 level]?*

A chart showing sample bases for figures on this page can be found at the end of this section.

## **Trends in Indicators of Potential Problem Drinking**

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In 1993 a series of questions was added to the survey to help identify problem drinking. This series of four questions is represented by the acronym “CAGE” (Ewing, 1998): “Have you felt you should cut down on your drinking?” (“C” for “cut down”); “Have people annoyed (“A”) you by criticizing about your drinking?”; “Have you felt bad or guilty (“G”) about your drinking?”; “Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover?” (“E” for “eye-opener”).

### **Should Cut Down on Drinking**

The percentage of the past-year drinkers (16–64) who say they feel they should cut down on their drinking increased between 1993 and 1995, from 12% to 18%, and remains near the 1995 level at 19% in 1999. [Figure 45-A]

### **People Annoyed About Drinking**

There was a small increase in the percentage of past year drinkers who say they have been annoyed by people criticizing them about their drinking in 1997 to about 6% of all drinkers, up from 4% previously. The increases are primarily among males and those age 16-20, this increased level has been sustained in 1999. [Figure 45-B]

### **Felt Bad or Guilty About Drinking**

There have also been significant increases in the percentage saying they have felt bad or guilty about their drinking, from 7% in 1993 and 1995 to 10% in 1999. There seems to be trend towards an increase in agreement with this statement among males, which should continue to be monitored in future surveys. [Figure 45-C]

### **Had a Drink First Thing in the Morning**

Changes in the percentage saying they have had a drink first thing in the morning to steady their nerves or get rid of a hangover are small, but statistically significant. [Figure 45-D]

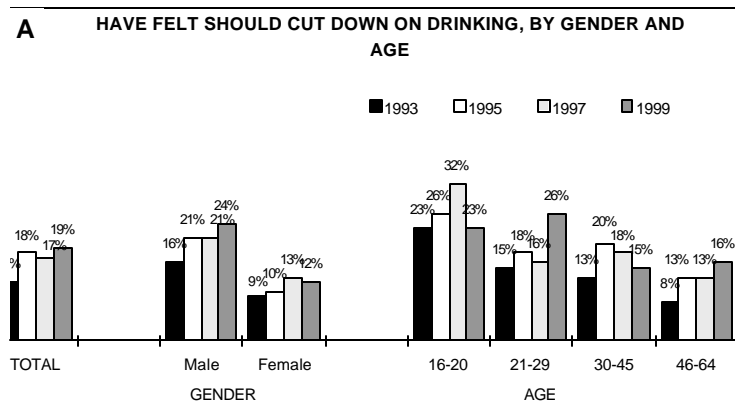
### **Problem Drinkers**

For this analysis, “problem-drinkers” were defined as expressing agreement (“yes”) to two or more of the four CAGE measures, or having consumed five or more drinks on four or more days in a typical 28-day period, or consumed eight or more drinks (nine for males) on at least one day in a typical 28-day period.

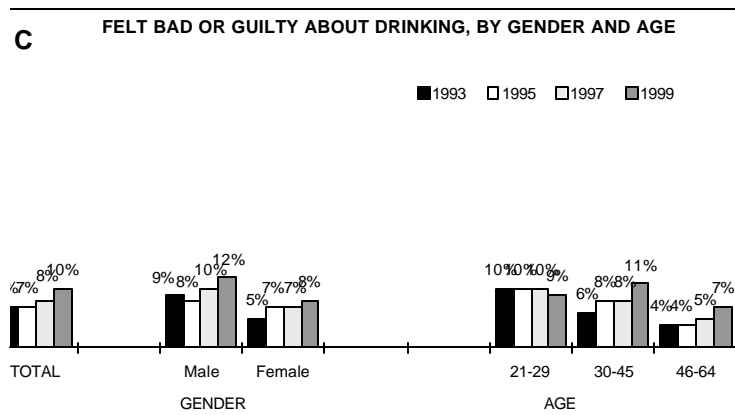
The proportion of drinker-drivers met the criteria as a problem drinker. In 1993, just 12% of drinker-drivers, this increased to 16% in 1995, to 18% in 1997 and to 23% in 1999. [Figure 45-E] This is a potentially important finding because problem drinkers are over represented in total trips, making 41% of all past-year drinking-driving trips.

**FIGURE 45: TRENDS IN INDICATORS OF POTENTIAL PROBLEM DRINKING**

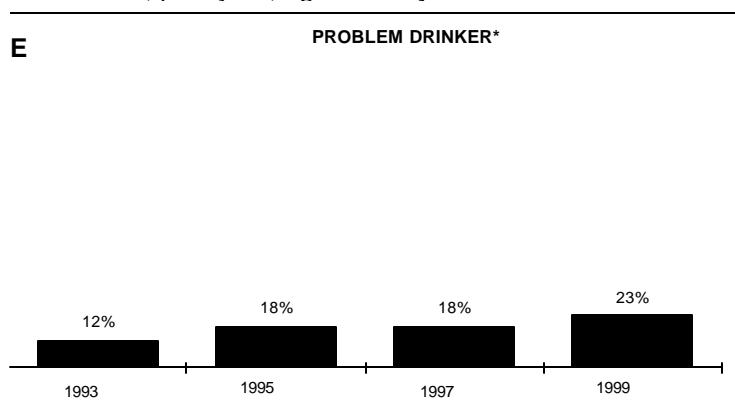
x: "In the past 12 months..."



x: ...have you felt you should cut down on your drinking?  
 Base: drank alcohol, past year, aged 16-64]



x: ...have you felt bad or guilty about your drinking? [Base: drank alcohol, past year, aged 16-64]



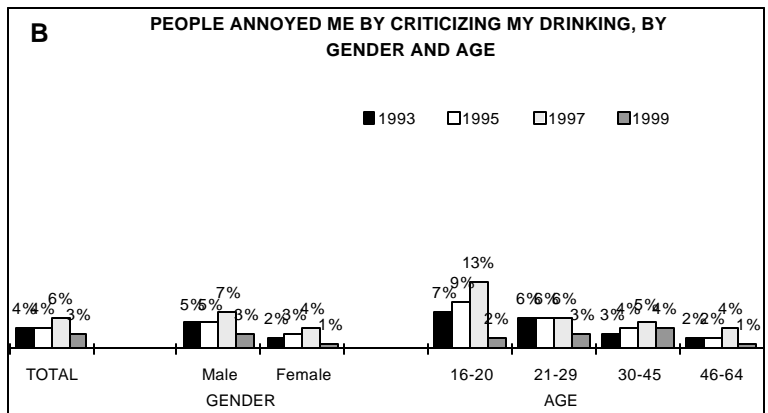
Base: Total Respondents age 16-64]

Problem drinkers" are defined as those who meet at least ONE of the following three conditions:

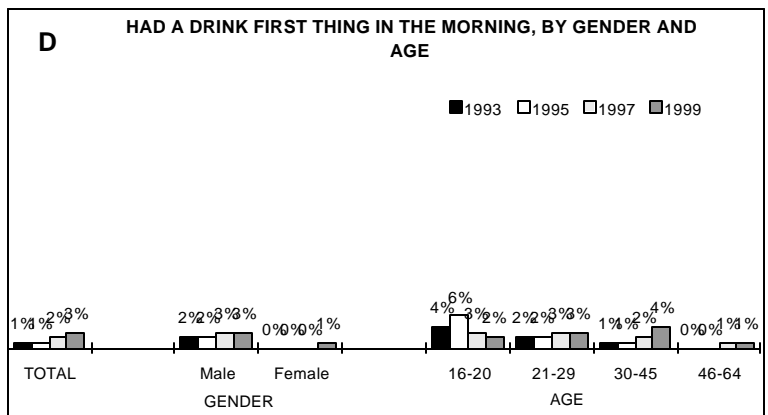
- (a) said "yes" to two or more of the "CAGE" measures;
- (b) consumed five or more drinks on four or more days in a typical four-week period; or
- (c) for females, consumed eight or more drinks on a given day in the past four weeks, or for males, consumed nine or more drinks on a given day in the past four weeks.

(Wing, 1984; Skinner and Holt, 1987).

chart showing sample bases for figures on this page can be found at the end of this section



Qx: ...have people ever annoyed you by criticizing your drinking? [Base: drank alcohol, past year, aged 16-64]



Qx: ...have you had a drink first thing in the morning to steady your nerves or get rid of a hangover? [Base: drank alcohol, past year, aged 16-64]



**FIGURE 46: UNWEIGHTED SAMPLE SIZES FOR FIGURES IN TREND SECTION**

Table for Figures 33-44:

<b>TOTAL ADULTS 16–64</b>											
	Total 16–64	Gender		Age					Drinking- drivers	Other drivers who drink	Total drivers who drink
		Male 16–64	Female 16–64	16-20	21-29	30-45	46-64	65+			
1991	2406	1036	1370	268	583	928	627	0	642	692	1334
1933	3590	1812	1778	617	1183	1125	665	381	1048	1445	2493
1995	3471	1763	1708	946	527	1154	844	507	767	1159	1926
1997	3358	1500	1858	282	588	1412	1076	629	878	1336	2214
1999	4264	1906	2358	318	764	1691	1476	863	1062	1638	2700

<b>TOTAL ADULTS 16–64, Drank Alcohol Past Year</b>											
	Total 16–64	Gender		Age					Drinking- drivers	Other drivers who drink	Total drivers who drink
		Male 16-64	Female 16-64	16-20	21-29	30-45	46-64	65+			
1991	1633	759	874	150	451	681	351	0	642	692	1578
1933	2493	1419	1243	331	915	832	415	166	1048	1445	2493
1995	2017	1419	1243	400	374	760	483	187	767	1159	1926
1997	2291	1120	1171	149	459	1019	664	277	878	1336	2214
1999	2770	1333	1445	154	579	1160	877	361	1062	1638	2700

<b>TOTAL ADULTS 16–64, Drove within 2 Hours of Drinking, Past Year</b>											
	Total 16–64	Gender		Age							
		Male 16-64	Female 16-64	16-20	21-29	30-45	46-64	65+			
1991	642	304	338	57	155	266	164	0			
1933	1048	722	326	83	414	390	161	68			
1995	767	529	238	87	167	320	193	56			
1997	878	568	292	34	200	400	244	79			
1999	1009	640	369	29	234	462	282	77			

